Cumulative Index 1989
FEMS Microbiology Letters Vols. 55–61
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FEMS MICROBIOLOGY INDEX

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INDEX VOLUMES 55–64 (1989)

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Volume 55–61, 1989

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FEMS MICROBIOLOGY ECOLOGY

Volume 62, 1989

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Volume 63, 1989

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Infection: Host Response and Immunity

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Bacteroid
Bacterium; *Rhizobium leguminosarum*; Symbiotic plasmid (Vierny, C. (60) 15)

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Bacteroides fragilis
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Biorestoration
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Carbenicillin-hydrolyzing enzyme; *Acinetobacter calcoaceticus* (Paul, G. (59) 45)

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Calcium binding protein; Mycobacteria (Falah, A.M.S. (56) 89)

Calcium binding protein; *Bacillus cereus*; Bacterial spore (Shyu, Y. (59) 235)

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Carbenicillin-hydrolyzing enzyme
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Carboxydobacteria
Carbon monoxide; CO dehydrogenase induction; Mixotrophic growth; *Acinetobacter* sp. JC1 (Kim, Y.J. (59) 207)

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Rhizobium spp.; Symbiosis; Carbon metabolism; Dicarboxylic acids; Glutamate; cAMP (O'Gara, F. (63) 93)

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Cell plate
Triangular bacterium; Cell division; Halobacterium; Cinematography (Hamamoto, T. (56) 221)

Cell size
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Cephalosporin
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Chlorine
Disinfection; UV-irradiation; Bacteriophages; Tap water; Sewage; *Bacteroides fragilis* (Tartera, C. (56) 313)

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Chlorobenzoate conversion
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Chlorocatechol degrading enzymes
Chlorobenzoate utilization; Hybrid organisms (Hartmann, J. (61) 17)

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Chloroform inhibition
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Chlorophyll *a*
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Choline
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Chromosomal map
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Aspergillus niger; Glycolysis; Hexokinase; Phosphofructokinase (Schreferl-Kunar, G. (59) 297)

***Citrobacter* isolation**
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Clindamycin resistance
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Clonal hypothesis
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Cloning
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Bacillus thuringiensis; δ-Endotoxin; Entomocidal (Ahmad, W. (59) 197)

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Haemagglutination; Capsule (Baldassarri, L. (60) 1)

Plasmid; Transformation; Conjugation; Transposon; Toxins; Fermentation; Gene cloning; Gene structure; Gene expression (Young, M. (63) 301)

Clostridium acetobutylicum
Transformation; Cloning vector; Electroporation (Oultram, J.D. (56) 83)

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***Clostridium difficile* toxin A**
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***Clostridium perfringens* epsilon toxin**
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***Clostridium* sp.**
Thermophilic bacterium; Protoplast formation (Pettinari, M.J. (58) 255)

Clostridium thermocellum
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Clostridium thermosaccharolyticum
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Clostridium thermosulfurogenes
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CNW campylobacters
'*C. upsaliensis*'; Electrophoresis; Protein patterns: Blood cultures (Owen, R.J. (58) 145)

Cobalt
Resistance plasmid; Heavy metal resistance; Nickel resistance (Schmidt, T. (62) 315)

CO_2-concentrating mechanisms
Carbon dioxide fixation; *Thiobacillus versutus*; *Synechococcus* PCC 7942; Ribulose bisphosphate carboxylase (Karagouni, A.D. (58) 179)

CO dehydrogenase induction
Carbon monoxide; Carboxydobacteria; Mixotrophic growth; *Acinetobacter* sp. JC1 (Kim, Y.J. (59) 207)

2-furoyl-Coenzyme A dehydrogenase
Bactopterin; Molybdenum cofactor; Nicotine dehydrogenase; 6-Hydroxynicotinate dehydrogenase (Nagel, M. (60) 323)

Coenzyme F_{420}
8-Hydroxy-5-deazaflavin; Fragment F_0; Tetracyclines; *Streptomyces aureofaciens*; *Streptomyces rimosus* (Novotná, J. (59) 241)

Methanobacterium thermoautotrophicum; Factor 390; 8-hydroxy-5-Deazaflavin (Kengen, S.W.M. (60) 5)

Coexistence
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Cohaemolysin
CAMP-factor; *Streptococcus canis*; Group G streptococcus (Gürtürk, K. (64) 97)

CO_2 limitation
Sulfur starvation; Nitrite excretion; *Synechococcus* (*Anacystis*) (Krämer, E. (59) 191)

Collagen
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Collagen breakdown
Virulence; Trypsin; Cytotoxin; Haemin; *Bacteroides gingivalis* (Marsh, P.D. (55) 87)

Colonization factor antigen II
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Colonization factor antigen I, II
Enterotoxigenic *Escherichia coli*; *Salmonella typhi*; Adherence; Human small intestine (Yamamoto, T. (55) 335)

Colony growth
Cyanobacteria; Optimum conditions (Thiel, T. (61) 27)

Colony hybridization
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Colony-immunoblotting
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Colourless sulphur-oxidising bacteria
Denitrifying; Shake agar technique; Marine estuarine environment (Bharathi, P.A.L. (62) 335)

Cometabolism
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Complement
Mycobacteria; Antibody; BCG (Parkash, O. (55) 255)

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Compost
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Conditioning
Acquired osmotolerance; Acquired thermotolerance; Physiological overlap; *sn*-Glycerol 3-P dehydrogenase; Heat shock protein; *Saccharomyces cerevisiae* (Trollmo, C. (56) 321)

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Conjugal mobilization
Escherichia coli; Bifunctional vectors; *Bacteroides*; Clindamycin resistance; Transposon Tn*501*; Shuttle plasmid (Pheulpin, P. (55) 15)

Conjugated polyketone reductase
Ketopantoyl lactone reductase; *Saccharomyces cerevisiae* (Hata, H. (58) 87)

Conjugation
Broad-host-range plasmid; Transposon mutagenesis; Cosmid mobilization; Rhizosphere; *Pseudomonas fluorescence* (Voisard, C. (55) 9)

Lactococcus lactis subsp. *lactis*; Protoplast transformation; Electroporation; Restriction/modification; pIP501. (Langella, P. (59) 301)

Lactobacillus delbrückii subsp. *bulgaricus*; *Lactobacillus helveticus*; *Lactococcus lactis* (Langella, P. (60) 149)

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Bacterial survival; Fixed film microcosm; Mercury resistance; Riverine bacteria (Rochelle, P.A. (62) 127)

Clostridium; Plasmid; Transformation; Transposon; Toxins; Fermentation; Gene cloning; Gene structure; Gene expression (Young, M. (63) 301)

Conjugative transfer
Group A streptococcus; Penicillin tolerance; Kanamycin, high-level resistance to (Lakshmi, T.M. (57) 329)

Contaminating proteins
Inclusion bodies; *Escherichia coli*; N-terminal sequence (Veeraragavan, K. (61) 149)

Continuous culture
Nif$^-$ mutants; *Rhodobacter capsulatus*; H_2 production (Willison, J.C. (56) 61)

pBR322-related plasmid; Immobilized cell; Plasmid stability; Plasmid copy number (Sayadi, S. (56) 307)

Neisseria gonorrhoeae; Iron limitation (Keevil, C.W. (59) 83)

Contraction
Clostridium perfringens epsilon toxin; Isolated rat ileum; Tetrodotoxin (Sakurai, J. (58) 269)

Copper
Cyanobacterium; Heavy metal; Immobilization; Uptake (Singh, S.P. (60) 193)

Coriolus versicolor
Lignin metabolism; Biphenyl structure; Aromatic ring fission; Quinone structure; Wood-rotting fungus (Katayama, Y. (61) 307)

Corynebacterium diphtheria
Macrolide-lincosamide-streptogramin B resistance; Erythromycin resistance; Methylase gene; Spontaneous deletion; *R*-plasmid (Serwold-Davis, T.M. (56) 7)

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Nocardioides fastidiosa sp. nov.; Taxonomy; Molecular systematics (Collins, M.D. (57) 289)

Cosmid
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Cosmid mobilization
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Counterselectable plasmids
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***p*-Cresol**
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Crohn's disease
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CrO_4^{2-} resistance
P. aeruginosa; Plasmid (Cervantes, C. (56) 173)

Cross-feeding
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Crown gall tumor
Enterobacter cloacae; Secondary tumor; Bean stem (Beltrá, R. (55) 203)

Cryosection
Nematophagous fungi; Egg parasites; *Verticillium*; Chitinase; Protease; Physiological disorder (Dackman, C. (62) 201)

Cryptococcus albidus
Ethylene; Ethylene-forming enzyme; 2-oxo-4-methylthiobutyric acid; NADH : Fe(III)EDTA oxidoreductase (Fukuda, H. (60) 107)

Crystalline outer membrane protein
Soil bacterium; *Nitrosospira*; Ultrastructure (Martikainen, P.J. (59) 313)

CS3 fimbriae
Colonization factor antigen II; Host restricted expression of CS fimbriae; Enterotoxigenic *Escherichia coli* (Twohig, J. (56) 327)

Culture
Diagnosis; Nucleic acid sandwich hybridization; *Chlamydia trachomatis*; Genital tract infection; Enzyme immunoassay (Puolakkainen, M. (55) 353)

Culture medium
Renibacterium salmoninarum; Hydrophobicity assays; Salinity (Bandín, I. (60) 71)

Culture turbidity
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'C. upsaliensis'
CNW campylobacters; Electrophoresis; Protein patterns: Blood cultures (Owen, R.J. (58) 145)

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Cyanobacteria
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Colony growth; Optimum conditions (Thiel, T. (61) 27)

Anabaena doliolum; Urease; Purification; Properties (Rai, A.K. (61) 319)

Oscillatoria rubescens; Amino acid incorporation; Microautoradiography (Bourdier, G. (62) 185)

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Anabaena doliolum; Urea-uptake; Regulation (Singh, S. (56) 281)

Nitrogenase regulation; Fe protein modification; Oxygen; Ammonia (Reich, S. (58) 81)

Glyphosate; Mutation; Heterocyst; Nitrogenase; NH_4^+-transport (Singh, A.K. (60) 187)

Heavy metal; Copper; Immobilization; Uptake (Singh, S.P. (60) 193)

Anabaena doliolum; Regulation; Urea-uptake (Singh, S. (61) 199)

Cyclic retention of amino acids
Amino acid catabolism (Szech, U. (58) 11)

Cyclopentanol
Methanogenic bacteria; Alcohol dehydrogenase; Secondary alcohols; Specificity; Substrates; NADPH/H^+; F_{420}; Growth (Bleicher, K. (59) 307)

Cysteine
Penicillin; Cephalosporin; *Cephalosporium acremonium*; Blastospore; Actin; Cytochalasins; Glutathione; Reductases (Crabbe, M.J.C. (56) 71)

Lactic acid; *Lactobacillus sake*; Plasmid composition (Shay, B.J. (56) 183)

Cytochalasins
Penicillin; Cephalosporin; *Cephalosporium acremonium*; Blastospore; Actin; Cysteine; Glutathione; Reductases (Crabbe, M.J.C. (56) 71)

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Cytochrome
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Cytochrome aa_3 mutant
cox Mutation; Respiratory chains; Cytochrome *o* (James, W.S. (58) 277)

Cytochrome b_{561}
Gene, *cybB*; *Escherichia coli* (Yamato, I. (56) 21)

Cytochrome c_2
Rhodobacter sphaeroides; *Escherichia coli*; Haem attachment; Protein export (McEwan, A.G. (59) 253)

Cytochrome *o*
Cytochrome aa_3 mutant; *cox* Mutation; Respiratory chains (James, W.S. (58) 277)

Cytochrome oxidase-positive bacteria
Chlorpromazine; Bacterial peroxidase detection (Galeazzi, L. (56) 317)

Cytochrome P-450
Membrane-bound enzyme; Isobutene-forming enzyme; *Rhodotorula minuta* (Fujii, T. (58) 199)

Cytokines
Lymphotoxin; Gene transcription; Receptors; Cytotoxicity; Immune regulation; Inflammation (Porter, A.G. (64) 193)

Cytolysin
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Cytokines; Lymphotoxin; Gene transcription; Receptors; Immune regulation; Inflammation (Porter, A.G. (64) 193)

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Cytotoxin
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Virulence; *Vibrio vulnificus* (Massad, G. (56) 295)

Enterotoxin; *Campylobacter jejuni* (Daikoku, T. (58) 33)

8-hydroxy-5-Deazaflavin
Methanobacterium thermoautotrophicum; Coenzyme F_{420}; Factor 390 (Kengen, S.W.M. (60) 5)

Degradation
Acinetobacter sp.; Lignin model substance (Vasudevan, N. (56) 349)

Homophthalic acid; *Pseudomonas* (Karegoudar, T.B. (58) 305)

Degradation of quinaldic acid
Meta-cleavage product; 2-oxo-3-(4′-hydroxy-2′-oxo-3′,4′-enbutyrate)-pyridine-6-carboxylic acid; Chemical mutagenesis; *Azotobacter* sp. (Dembek, G. (56) 261)

Degradation of quinoline-4-carboxylic acid
Chemical mutagenesis; *Microbacterium* sp.; 2-oxo-1,2-dihydroquinoline-4-carboxylic acid; 8-hydroxy-2-oxo-2H-1-benzopyran-4-carboxylic acid (Röger, P. (57) 279)

Degradative plasmids
Pseudomonas fluorescens; Styrene degradation (Ruzzi, M. (59) 337)

Dehalogenase enzyme assay
Pseudomonas putida; Ion chromatography (Smith, J.M. (57) 71)

Dehydration
Desiccation; Freezing; Temperature stress (Van Laere, A. (63) 201)

Dehydrogenase
Bacterium; Cinnamaldehyde; Lignin; *Pseudomonas*; Vanillic acid; Vanillin; Vanillyl alcohol (Pelmont, J. (57) 109)

Enterobacteriaceae; Glucose transport; Phosphotransferase system; Oxidoreductase; Glucokinase (Grimont, P.A.D. (63) 109)

Deleya halophila
Salt adaptation; Bacterial growth; Protein synthesis (Economou, A. (62) 103)

Delignification
Pleurotus ostreatus; Cellulose hydrolysis ultrastructure (Schiesser, A. (61) 159)

Delineation
Bacillus thuringiensis; Toxin; Dual toxicity; Mutant protein; Specificity (Haider, M.Z. (58) 157)

Denitrification
Nitrate ammonification; Microbial competition; Chemostat (Rehr, B. (62) 51)

Nitrogen cycling in minesoils; Nitrous oxide production; Nitrate-reducing bacteria (Shirey, J.J. (62) 59)

Denitrifying
Colourless sulphur-oxidising bacteria; Shake agar technique; Marine estuarine environment (Bharathi, P.A.L. (62) 335)

2-Deoxyglucose
NMR, ^{31}P; Internal pH; *Saccharomyces cerevisiae* (Loureiro-Dias, M.C. (57) 25)

Desiccation
Dehydration; Freezing; Temperature stress (Van Laere, A. (63) 201)

Desulfotomaculum orientis
Tetrazolium salts; Sulfate-reducing bacteria; Starvation; Electron transport system activity; *Desulfovibrio desulfuricans* (Fukui, M. (62) 13)

Desulfovibrio
Dissimilatory sulfate reduction; NADH dehydrogenase; NADH oxidation; Menaquinone (Kremer, D.R. (58) 43)

Transfer of IncP1 plasmids; Mobilisation of IncQ plasmids; IncP1 mediated retrotransfer (hermaphroditism) (Powell, B. (59) 269)

Heme; Nitrite; Respiration; Phosphorylation; Membranes; Protoporphyrin (Klemm, D.J. (61) 61)

Desulfovibrio desulfuricans
Tetrazolium salts; Sulfate-reducing bacteria; Starvation; Electron transport system activity; *Desulfotomaculum orientis* (Fukui, M. (62) 13)

Desulfovibrio gigas
nifH; Nitrogen fixation (Kent, H.M. (61) 73)

Detection
DNA probe; Eubacteria; Nucleic acid hybridization (Chen, K. (57) 19)

Detergent sodium dodecylbenzene sulphonate
Methanogenesis; *Methanosarcina barkeri*; Anaerobic digestion (Khalil, E.F. (57) 313)

D-fructose
Ethanol; D-glucose; Induction; Pentose; Repression; D-xylose (Bicho, P.A. (57) 323)

D-glucose
Ethanol; D-fructose; Induction; Pentose; Repression; D-xylose (Bicho, P.A. (57) 323)

2,3-DHBA
Rhizobium leguminosarum IARI 102; Siderophore; Iron (Patel, H.N. (56) 131)

Diagnosis
Nucleic acid sandwich hybridization; Culture; *Chlamydia trachomatis*; Genital tract infection; Enzyme immunoassay (Puolakkainen, M. (55) 353)

2,3-Diamino-2,3-dideoxy-D-glucose
Lipopolysaccharide; Lipid A epitopes (Arata, S. (60) 223)

Diarrhoea
Fimbria; Adhesin; *Escherichia coli* (Broes, A. (55) 341)

Campylobacter; Antigens; Antisera; Strains (Sjögren, E. (57) 237)

Verocytotoxin; Enterotoxin; Adherence; *Escherichia coli* (Katouli, M. (59) 177)

Diarrhoeal disease
Glycopeptide; *Escherichia coli* (Sherman, P. (61) 121)

Diauxie
Serendipity; Sialic acid; Sugar transport; Phosphotransferase system (Roseman, S. (63) 3)

Dibenzodioxin
Enrichment; Dibenzofuran degradation; Cometabolism; Salicylate (Strubel, V. (58) 233)

Dibenzofuran degradation
Enrichment; Dibenzodioxin; Cometabolism; Salicylate (Strubel, V. (58) 233)

Dicarboxylic acids
Rhizobium spp.; Symbiosis; Carbon metabolism; Catabolite repression; Glutamate; cAMP (O'Gara, F. (63) 93)

Dictyostelium discoideum
Membrane potential; Pseudoplasmodium; AMP, cyclic (Kitami, M. (55) 269)

Diesel
Petroleum cuts; Kerosene; Pre-adaptation; Enrichment; Oil pollution (Amanchukwu, S.C. (57) 151)

Dihydrolipoamide acetyltransferase
Pelobacter carbinolicus; Acetoin cleavage; Acetoin: DCPIP oxidoreductase; Dihydrolipoamide dehydrogenase; Ferredoxin (Oppermann, F.B. (60) 113)

Multienzyme complexes; Pyruvate dehydrogenase complex; Lipoyl domains; Catalytic domains; Intragenic complementation; *Escherichia coli* (Russell, G.C. (60) 267)

Dihydrolipoamide dehydrogenase
Pelobacter carbinolicus; Acetoin cleavage; Acetoin: DCPIP oxidoreductase; Dihydrolipoamide acetyltransferase; Ferredoxin (Oppermann, F.B. (60) 113)

Dimorphism
Candida albicans; Hydrophobicity; Germination (Hazen, B.W. (57) 167)

Disinfection
UV-irradiation; Chlorine; Bacteriophages; Tap water; Sewage; *Bacteroides fragilis* (Tartera, C. (56) 313)

Dissimilatory sulfate reduction
Desulfovibrio; NADH dehydrogenase; NADH oxidation; Menaquinone (Kremer, D.R. (58) 43)

DNA
Brucella phages; Restriction map (Segondy, M. (56) 177)

Agarose gel electrophoresis; Infected larvae; Insects; Restriction endonucleases (Hamelin, C. (60) 233)

DNA damage
4-Nitroquinoline-*N*-oxide; Heat shock; Protein synthesis; *Chlamydomonas reinhardtii* (Nicholson, P. (60) 283)

DNA-dependent RNA polymerase
Archaebacterium promoter; Filter-binding; Methanogen (Brown, J.W. (60) 131)

DNA-DNA hybridization
Taxonomy; *Lactobacillus malefermentans*; *Lactobacillus parabuchneri* (Farrow, J.A.E. (55) 163)

DNA gyrase
Archaebacterium; Reverse gyrase; Topoisomerase; Thermoacidophiles (Collin, R.G. (55) 235)

Strict aerobic growth; Anaerobiosis; Gene fusion; Nalidixic acid resistance; *gyrA* (Yamamoto, N. (56) 209)

DNA homology
Vibrio costicola; Moderately halophilic eubacteria (Gutiérrez, M.C. (61) 37)

DNA hybridization
Enterobacteriaceae; Glucose transport (Bouvet, O.M.M. (56) 145)

IncFIV plasmid; Plasmid (Campbell, I.G. (57) 45)

Edema disease; Shiga-like toxin; Enterohemorrhagic *Escherichia coli* (Meyer, T. (57) 247)

Salmonella; Virulence plasmid (Korpela, K. (58) 49)

DNA isolation
Cyanobacteria; Plasmid (Smoker, J.A. (56) 119)

DNA-mediated gene transfer
Major histocompatibility complex; Tumour-specific immunity (Hui, K.M. (64) 215)

DNA-Methyltransferase
Streptomyces antibioticus (Barbes, C. (55) 59)

DNA penetration
Protein phosphorylation; Phosphotransferase; Mannose; Phage λ (Erni, B. (63) 13)

DNA probe
Eubacteria; Nucleic acid hybridization; Detection (Chen, K. (57) 19)

Repeated sequences; *Streptomyces*; Colony hybridization (Kuczek, K. (61) 257)

DNA repair mutants
Streptomyces cattleya; Genetic instability; Mitomycin C (Hromic, A. (57) 139)

DNA restriction banding pattern
Frankia; Actinorhiza; Plasmid profile; *Elaeagnus angustifolia*; *Shepherdia argentea*; *Hippophaë rhamnoides* (Dobritsa, S.V. (58) 287)

DNA sequence
β-D-phosphogalactoside galactohydrolase; EnzymeII; Factor-III; *Lactobacillus casei*; Lactose-PTS; Plasmid; Protein sequence (Chassy, B.M. (63) 157)

Domain homology
Exoglucanase; Endoglucanase; Trophic adaptation (West, C.A. (59) 167)

Drug resistance
Outer membrane; Permeability; *Pseudomonas*; Opportunistic pathogen (Yamazaki, E. (60) 85)

Dual specificity
Isocitrate dehydrogenase; *Rhodomicrobium vannielli*; NAD; NADP (Leyland, M.L. (58) 165)

Dual toxicity
Bacillus thuringiensis; Delineation; Toxin; Mutant protein; Specificity (Haider, M.Z. (58) 157)

Dunaliella
Glycerol metabolism; Hypoosmotic stress; Osmoregulation (Goyal, A. (61) 145)

Duodenal ulcer
Antral gastritis; Pathogenesis; Virulence factor; Adhesin (Huang, J. (56) 109)

D-xylose
Ethanol; D-fructose; D-glucose; Induction; Pentose; Repression (Bicho, P.A. (57) 323)

Dye-ligand affinity chromatography
Staphylococcus aureus; Endo-β-*N*-acetylglucosaminidase; Purification (Sugai, M. (61) 267)

pE194
Electro-transformation; Electropermeabilization; *Bacillus subtilis*; pUB110; pC194 (Vehmaanperä, J. (61) 165)

EB adhesin
Chlamydia; Radioiodination; Mammalian cell receptor (Kaul, R. (57) 65)

Ecology
Thermophile; *Bacillus acidocaldarius* (Hudson, J.A. (60) 279)

Edema disease
Shiga-like toxin; DNA hybridization; Enterohemorrhagic *Escherichia coli* (Meyer, T. (57) 247)

Effects of potassium and glucose limitation.
TOL plasmid; Plasmid stability (Stephens, G.M. (55) 175)

Egg parasites
Nematophagous fungi; *Verticillium*; Chitinase; Protease; Physiological disorder; Cryosection (Dackman, C. (62) 201)

Elaeagnus angustifolia
Frankia; Actinorhiza; DNA restriction banding pattern; Plasmid profile; *Shepherdia argentea*; *Hippophaë rhamnoides* (Dobritsa, S.V. (58) 287)

Electric field pulses
Bordetella; Transformation; Electroporation (Zealey, G. (56) 123)

Electrofusion
Protoplasts; *Aspergillus nidulans* (Lynch, P.T. (59) 225)

Fragile yeasts; Protoplasts (Tsoneva, I. (60) 61)

Electron microscopic studies
Protein F-deficient mutant; Osmotic shock; *Pseudomonas aeruginosa* (Gotoh, N. (59) 51)

Electron microscopy
Oxaloacetate decarboxylase; Prosthetic biotin group; Affinity labeling; *Klebsiella pneumoniae* (Däkena, P. (55) 35)

Mycobacteria; Capsule (Fréhel, C. (56) 225)

Membrane-bound hydrogenase; *Alcaligenes eutrophus* (Gerberding, H. (60) 159)

Electron transport system activity
Tetrazolium salts; Sulfate-reducing bacteria; Starvation; *Desulfovibrio desulfuricans*; *Desulfotomaculum orientis* (Fukui, M. (62) 13)

Electropermeabilization
Electro-transformation; *Bacillus subtilis*; pUB110; pC194; pE194 (Vehmaanperä, J. (61) 165)

Electrophoresis
'*C. upsaliensis*'; CNW campylobacters; Protein patterns: Blood cultures (Owen, R.J. (58) 145)

Electroporation
Clostridium acetobutylicum; Transformation; Cloning vector (Oultram, J.D. (56) 83)

Streptococcus pyogenes; Transformation; Plasmid (Suvorov, A. (56) 95)

Bordetella; Transformation; Electric field pulses (Zealey, G. (56) 123)

Bacillus thuringiensis; Transformation (Bone, E.J. (58) 171)

Lactococcus lactis subsp. *lactis*; Conjugation; Protoplast transformation; Restriction/modification; pIP501. (Langella, P. (59) 301)

Bacillus thuringiensis; Transformation (Mahillon, J. (60) 205)

Genetic expression; Insecticidal activity; Plasmid; Toxin gene (Lereclus, D. (60) 211)

Bacillus thuringiensis; Plasmid transformation (Masson, L. (60) 273)

Bacteroides; Transformation; Plasmids (Thomson, A.M. (61) 101)

Azospirillum; Plasmid DNA (Vande Broek, A. (61) 177)

Brevibacterium lactofermentum; Tween 80 (Haynes, J.A. (61) 329)

Electro-transformation
Electropermeabilization; *Bacillus subtilis*; pUB110; pC194; pE194 (Vehmaanperä, J. (61) 165)

ELISA
Phototrophic bacteria; Malate dehydrogenase; Enzyme immunoassay (Tayeh, M.A. (55) 151)

Oral streptococci; Surface LTA (Hogg, S.D. (58) 239)

Helicobacter pylori; Seroepidemiology; Gastritis; Serological screening (Pateraki, E. (64) 129)

Elongation factor Tu
Nucleotide sequence; *Thermotoga maritima*; Phylogeny (Bachleitner, M. (57) 115)

Endo-β-*N*-acetylglucosaminidase
Staphylococcus aureus; Purification; Dye-ligand affinity chromatography (Sugai, M. (61) 267)

Endocellulase
Trichoderma reesei; Immunomicroscopy; Cell wall; Cellulose (Sprey, B. (55) 283)

Endochitinase
Aspergillus nidulans; Autolysis (Reyes, F. (60) 119)

Endodeoxyribonuclease
Phage adsorption; Adsorption; *Streptomyces antibioticus* (De los Reyes-Gavilán, C.G. (56) 301)

Endoglucanase
Exoglucanase; Domain homology; Trophic adaptation (West, C.A. (59) 167)

Endospores
D-BAPA hydrolysis; Haloanaerobiaceae; *Haloanaerobium praevalens* (Oren, A. (58) 5)

Endotoxin
Inositol phosphates; Superoxide; Phagocyte (Qu, J. (64) 279)

δ-Endotoxin
Bacillus thuringiensis; Cloning; Entomocidal (Ahmad, W. (59) 197)

Endproduct inhibition
Chitin; Mixed cultures; Cross-feeding; Thioredoxin; Folic acid (Pel, R. (62) 191)

Energy charge
Microbial growth; Acclimation; Aquatic toxicity; Adenylate; Chlorophyll *a* (Auclair, J.C. (62) 137)

Energy flux
Microcalorimetry; Luminous bacteria (Makemson, J.C. (57) 161)

Enrichment
Petroleum cuts; Kerosene; Diesel; Pre-adaptation; Oil pollution (Amanchukwu, S.C. (57) 151)

Dibenzodioxin; Dibenzofuran degradation; Cometabolism; Salicylate (Strubel, V. (58) 233)

Enrichment and isolation
Cardinal temperatures; H_2 turnover rate constants; Chloroform inhibition; Methanogenic environments (Conrad, R. (62) 285)

Entamoeba histolytica
Monoclonal antibody; Trophozoites; 29-kDa Surface-associated adhesive molecule (Vinayak, V.K. (64) 169)

Enteric bacteria
Chemotaxis; PTS-carbohydrates; Molecular mechanisms (Lengeler, J.W. (63) 81)

Enteroadherent-aggregative strains of *E. coli*
MRE haemagglutinin; Mouse and rat erythrocytes; Fibrillae (Old, D.C. (59) 87)

Enterobacter cloacae
Crown gall tumor; Secondary tumor; Bean stem (Beltrá, R. (55) 203)

Enterobacteriaceae
Glucose transport; DNA hybridization (Bouvet, O.M.M. (56) 145)

Conjugation; R-plasmid (Jayaratne, A.H.G.P. (62) 79)

Glucose transport; Phosphotransferase system; Oxidoreductase; Dehydrogenase; Glucokinase (Grimont, P.A.D. (63) 109)

Enterobacterial common antigen
Colony-immunoblotting; Mutant screening (Meier-Dieter, U. (59) 215)

Enterobactin
Chorismate; Isochorismate synthase; Iron regulation (Elkins, M.F. (56) 35)

Iron assimilation; Enterobactin synthetase (Staab, J.F. (59) 15)

Enterobactin synthetase
Enterobactin; Iron assimilation (Staab, J.F. (59) 15)

Enterococcus
Chemotaxonomy; Nucleic acid hybridization (Collins, M.D. (57) 283)

Enterococcus faecalis
Surface protein; Antigen; Growth conditions; Biofilm (Lambert, P.A. (64) 51)

Enterohemorrhagic *Escherichia coli*
Edema disease; Shiga-like toxin; DNA hybridization (Meyer, T. (57) 247)

Enterotoxigenic *Escherichia coli*
Salmonella typhi; Adherence; Colonization factor antigen I, II; Human small intestine (Yamamoto, T. (55) 335)

Colonization factor antigen II; CS3 fimbriae; Host restricted expression of CS fimbriae (Twohig, J. (56) 327)

Enterotoxin
Cytotoxin; *Campylobacter jejuni* (Daikoku, T. (58) 33)

Verocytotoxin; Adherence; *Escherichia coli*; Diarrhoea (Katouli, M. (59) 177)

Clostridium perfringens; Sporulation; Macromolecular synthesis (Dillon, M.E. (59) 221)

Enterotoxins
Escherichia coli; Shiga-like toxins; Genes; Pathogenesis (Meyer, T. (58) 115)

Escherichia coli; Pig; Verotoxins; Gene probes (Mainil, J. (59) 345)

Entomocidal
Bacillus thuringiensis; Cloning; δ-Endotoxin (Ahmad, W. (59) 197)

Entomopathogen
Metarhizium anisopliae; Fungus; Protoplast; Transformation; Cosmid (Bernier, L. (60) 261)

Envelope protein
HIV-1; gp41; gp120; HIV-1 polypeptides expressed in *E. coli*; Monoclonal antibody (Larcher, C. (64) 103)

Enzyme activation
Secondary metabolism; Feedback regulation; Alkaloid; *Penicillium cyclopium* (Roos, W. (59) 27)

Enzyme I
Enzyme III^{mtl}; Enzyme III^{lac}; Protein sequence similarities (Hengstenberg, W. (63) 35)

EnzymeII
β-D-phosphogalactoside galactohydrolase; DNA sequence; FactorIII; *Lactobacillus casei*; Lactose-PTS; Plasmid; Protein sequence (Chassy, B.M. (63) 157)

Enzyme III^{lac}
Enzyme I; Enzyme III^{mtl}; Protein sequence similarities (Hengstenberg, W. (63) 35)

Enzyme III^{mtl}
Enzyme I; Enzyme III^{lac}; Protein sequence similarities (Hengstenberg, W. (63) 35)

Enzyme III^{Glc}
Phosphotransferase system; Fructose PTS; Regulation; Phosphoprotein; Inducer exclusion (Postma, P.W. (63) 69)

Enzyme immunoassay
Phototrophic bacteria; Malate dehydrogenase; ELISA (Tayeh, M.A. (55) 151)

Diagnosis; Nucleic acid sandwich hybridization; Culture; *Chlamydia trachomatis*; Genital tract infection (Puolakkainen, M. (55) 353)

Enzyme inactivation
Candida utilis; Trehalose-6-phosphate synthases; Protein phosphorylation (Vicente-Soler, J. (61) 273)

Enzyme inhibition
Trypanosoma cruzi; Fructose 2,6-diphosphate (Cazzulo, J.J. (59) 259)

Enzyme inhibitor
(Stevens, L. (57) 173)

Enzyme location
Pyruvate carboxylase; *Aspergillus niger* (Purohit, H.J. (55) 129)

Enzyme purification
Malate synthase; Peroxisomes; *Hansenula polymorpha* (Bruinenberg, P.G. (61) 11)

Eosphora
Protozoa; Mortality; *Carchesium*; *Epistylis*; *Chaetogaster* (Kusuoka, Y. (62) 7)

Epidermin
Lantibiotic; Gallidermin; Nucleotide sequence; Post translational modification; *Staphylococcus gallinarum* (Schnell, N. (58) 263)

Epistylis
Protozoa; Mortality; *Carchesium*; *Chaetogaster*; *Eosphora* (Kusuoka, Y. (62) 7)

Epitopes
Phosphoryl transfer; Two-dimensional NMR; Protein structure; X-ray diffraction; Sugar transport (Waygood, E.B. (63) 43)

Epoxides
Ethene; Acetylene; Alkenes (Hartmans, S. (63) 235)

Erwinia
β-glucoside; PTS; *Escherichia coli* (Barras, F. (63) 143)

Erwinia ananas
Ice nucleation activity; *ina*A (Arai, S. (61) 53)

***Erythrobacter* sp. OCh 114**
Acid phosphatase; 5′-phosphate (Doi, M. (55) 309)

Erythrocyte
Vibrio vulnificus; *Vibrio*; Hemolysis; Hemolysin; Cytolysin (Yamanaka, H. (61) 251)

Erythrocyte lysis
Porphyromonas gingivalis; Protease; Haemagglutination; Vesicles (Shah, H.N. (61) 213)

Erythromycin resistance
Corynebacterium diphtheria; Macrolide-lincosamide-streptogramin B resistance; Methylase gene; Spontaneous deletion; *R*-plasmid (Serwold-Davis, T.M. (56) 7)

Escherichia coli
Protein secretion; Periplasmic protein; α-Amylase; *Bacillus stearothermophilus* (Suominen, I. (55) 3)

Bifunctional vectors; Conjugal mobilization; *Bacteroides*; Clindamycin resistance; Transposon Tn*501*; Shuttle plasmid (Pheulpin, P. (55) 15)

Amino acid sequence; Synthetic peptide; Heat-stable enterotoxin; Monoclonal antibody (Svennerholm, A.-M. (55) 23)

Gene regulation; Promoter test vector; Bacteriophage Mu; Gene expression; Transcriptional fusion (Apfel, C. (55) 65)

Shigella sp.; Outer membrane; Shiga-like toxin (Sharma, K. (55) 105)

Formate hydrogenlyase regulation; Fnr protein; *hydC* gene (Cole, J.A. (55) 169)

Formaldehyde resistance; Plasmid; Cloning; Expression (Kaulfers, P.-M. (55) 299)

Hybrid protein; *Omp*C; Protein export; Gene fusion (Saarilahti, H.T. (55) 327)

Fimbria; Adhesin; Diarrhoea (Broes, A. (55) 341)

Gene, *cybB*; Cytochrome b_{561} (Yamato, I. (56) 21)

Chemostat culture; Plasmid; Genetic stability (Chew, L.C.K. (56) 101)

Hemolysin excretion; Mutant (Muñoa, F. (56) 167)

Fimbrial antigen F165; Production; Purification (Fairbrother, J.M. (56) 247)

Ribosomal mutant (Mikkola, R. (56) 265)

Hemagglutinating activity; Heat-labile enterotoxin; Chicken strain (Sugii, S. (57) 105)

Pyelonephritis; Brush border membrane; Pili immunization (Garg, U.C. (57) 155)

β-lactamase; Cephaloridine resistance (Nandivada, L.S. (57) 219)

Cell size; Cell buoyant density; Glycogen; Macromolecular composition (Mas, J. (57) 231)

4-Hydroxyphenylacetate catabolism; *Klebsiella pneumoniae*; 5-Carboxymethyl-2-hydroxymuconic semialdehyde dehydrogenase; N-terminal sequence (Fawcett, T. (57) 307)

Vir plasmid; Toxin; Multinucleation (Oswald, E. (58) 95)

Enterotoxins; Shiga-like toxins; Genes; Pathogenesis (Meyer, T. (58) 115)

Superoxide dismutase (Hassan, H.M. (58) 133)

IPNS gene; *Cephalosporium acremonium*; Expression; Promoter; *Streptomyces lividans* (Patiño, C. (58) 139)

F1, F8 fimbriae; Gene cloning; Gene mapping (Krallmann-Wenzel, U. (58) 315)

Verocytotoxin; Enterotoxin; Adherence; Diarrhoea (Katouli, M. (59) 177)

Rhodobacter sphaeroides; Cytochrome c_2; Haem attachment; Protein export (McEwan, A.G. (59) 253)

Antigen; Cell surface; Fimbria (Contrepois, M. (59) 319)

Pig; Verotoxins; Enterotoxins; Gene probes (Mainil, J. (59) 345)

Membrane lipoprotein; Murein (Leduc, M. (60) 11)

Aerobactin; Plasmid; Antibiotic resistance (Martínez, J.L. (60) 41)

Multienzyme complexes; Pyruvate dehydrogenase complex; Dihydrolipoamide acetyltransferase; Lipoyl domains; Catalytic domains; Intragenic complementation (Russell, G.C. (60) 267)

Chlorhexidine; Azolectin; *Pseudomonas aeruginosa* (Fitzgerald, K.A. (60) 327)

Cell wall; LPS particles (Zorzopulos, J. (61) 23)

Antigenic cross-reaction; Fimbriae; ETEC (McConnell, M.M. (61) 105)

Glycopeptide; Diarrhoeal disease (Sherman, P. (61) 121)

Contaminating proteins; Inclusion bodies; N-terminal sequence (Veeraragavan, K. (61) 149)

Lactococcus lactis; Plasmid; Complementation; Lactose transport gene (Ross, R. (61) 183)

Outer membrane protein; Adhesion (Chart, H. (61) 291)

Outer membrane protein; Maltodextrin binding; Phage Lambda binding (Ferenci, T. (61) 335)

Erwinia; β-glucoside; PTS (Barras, F. (63) 143)

Peptidase; Protease; *Salmonella typhimurium* (Lazdunski, A.M. (63) 265)

***Escherichia coli* haemagglutinin**
Nonfimbrial adhesin; Blood group N-specific adhesin (Grünberg, J. (56) 241)

Essential region of replicon
Streptomyces plasmid; Vector construction (Petříček, M. (61) 109)

ETEC
Escherichia coli; Antigenic cross-reaction; Fimbriae (McConnell, M.M. (61) 105)

Ethanol
Heat shock response; *Sulfolobus acidocaldarius*; *Thiobacillus ferrooxidans*; Thermotolerance; Protein synthesis (Jerez, C.A. (56) 289)

D-fructose; D-glucose; Induction; Pentose; Repression; D-xylose (Bicho, P.A. (57) 323)

Anaerobic; Acetate; Lactate; Succinate (Clark, D.P. (63) 223)

Ethene
Acetylene; Alkenes; Epoxides (Hartmans, S. (63) 235)

Ether Lipids
Osmoregulation; Halophiles; Archaebacteria; Glycine betaine (Nicolaus, B. (59) 157)

Ethionine
Pseudomonas fluorescens; Methionine; 3-hydroxy-3-methyl-Glutaric acid; Monic acid A; Antibiotic; Pseudomonic acid A (Mantle, P.G. (59) 55)

Ethylene
Ethylene-forming enzyme; *Penicillium digitatum* (Fukuda, H. (59) 1)

Ethylene-forming enzyme; 2-oxo-4-methylthiobutyric acid; *Cryptococcus albidus*; NADH : Fe(III)EDTA oxidoreductase (Fukuda, H. (60) 107)

Ethylene-forming enzyme
Ethylene; *Penicillium digitatum* (Fukuda, H. (59) 1)

Ethylene; 2-oxo-4-methylthiobutyric acid; *Cryptococcus albidus*; NADH : Fe(III)EDTA oxidoreductase (Fukuda, H. (60) 107)

Eubacteria
DNA probe; Nucleic acid hybridization; Detection (Chen, K. (57) 19)

Anaerobic halophile; Moderate halophile; Alkalophile; *Haloanaerobium* (Shiba, H. (57) 191)

Evolution
Nucleic acid sequences; Membrane targeting; Transcriptional regulation; Protein phosphorylation; Bacterial virulence (Saier, Jr., M.H. (63) 183)

Evolutionary conservation/eubacteria/archaebacteria
Yeast HSP70 gene; Thermophiles (Lambert, E. (56) 157)

Ewe abortion agent
Chlamydia psittaci; Outer membrane protein; Nucleotide sequence (Pickett, M.A. (55) 229)

Exoglucanase
Endoglucanase; Domain homology; Trophic adaptation (West, C.A. (59) 167)

Exolipid
Serratia marcescens; Spreading growth; Fractal (Matsuyama, T. (61) 243)

Expression
Escherichia coli; Formaldehyde resistance; Plasmid; Cloning (Kaulfers, P.-M. (55) 299)

IPNS gene; *Escherichia coli*; *Cephalosporium acremonium*; Promoter; *Streptomyces lividans* (Patiño, C. (58) 139)

Extracellular cations
Polymorphonuclear chemiluminescence (Janah, S. (64) 313)

Extracellular haemolysin
Aeromonas salmonicida; Extracellular protease; Lethal toxin (Atlantic salmon) (Lee, K.-K. (61) 127)

Extracellular polysaccharides
Butyrivibrio fibrisolvens; L-altrose; 1,6-anhydroaltrose; (−)-2-Octanol; Alditol acetates (Stack, R.J. (56) 1)

Extracellular production
Secretion vector; Alkalophilic *Bacillus* sp.; Fused protein; Calcitonin (Kato, H. (57) 339)

Extracellular protease
Aeromonas salmonicida; Extracellular haemolysin; Lethal toxin (Atlantic salmon) (Lee, K.-K. (61) 127)

Extracellular protein
Staphylococcus aureus; Gene expression (Coleman, G. (61) 247)

Propionibacteriaceae; Tetracyclines (Chopra, I. (60) 21)

F_{420}
Methanogenic bacteria; Alcohol dehydrogenase; Secondary alcohols; Specificity; Substrates; $NADPH/H^+$; Cyclopentanol; Growth (Bleicher, K. (59) 307)

Factor 390
Methanobacterium thermoautotrophicum; Coenzyme F_{420}; 8-hydroxy-5-Deazaflavin (Kengen, S.W.M. (60) 5)

FactorIII
β-D-phosphogalactoside galactohydrolase; DNA sequence; EnzymeII; *Lactobacillus casei*; Lactose-PTS; Plasmid; Protein sequence (Chassy, B.M. (63) 157)

Facultative anaerobe
Aerobic metabolism; Anaerobic metabolism (Niimura, Y. (61) 79)

Faecal bacterium
Trimethoprim; Resistance; Gram-negative bacterium (Lamikanra, A. (59) 275)

Fatty acid
Yeast; Resistance (Šajbidor, J. (58) 195)

Trypanosoma cruzi; Lipid; Cell differentiation (Esteves, M.G. (59) 31)

Pseudomonas vesicularis; Lipid (Barnes, A. (59) 101)

Biomarkers; Polar lipids; Methane-utilizing bacteria; Propane-utilizing bacteria (Ringelberg, D.B. (62) 39)

Feedback regulation
Secondary metabolism; Enzyme activation; Alkaloid; *Penicillium cyclopium* (Roos, W. (59) 27)

Fe protein modification
Cyanobacterium; Nitrogenase regulation; Oxygen; Ammonia (Reich, S. (58) 81)

Fermentation
Phototrophic bacteria; Fumarate reduction (Hiraishi, A. (56) 199)

Clostridium; Plasmid; Transformation; Conjugation; Transposon; Toxins; Gene cloning; Gene structure; Gene expression (Young, M. (63) 301)

TCA cycle; Regulation; PHB (McDermott, T.R. (63) 327)

Fermenting bacteria
H_2 concentration; H_2 turnover; Interspecies H_2 transfer; Homoacetogenic bacteria; Rice (Conrad, R. (62) 265)

Ferredoxin
Pelobacter carbinolicus; Acetoin cleavage; Acetoin: DCPIP oxidoreductase; Dihydrolipoamide dehydrogenase; Dihydrolipoamide acetyltransferase (Oppermann, F.B. (60) 113)

F1, F8 fimbriae
Escherichia coli; Gene cloning; Gene mapping (Krallmann-Wenzel, U. (58) 315)

Fibrillae
MRE haemagglutinin; Mouse and rat erythrocytes; Enteroadherent-aggregative strains of *E. coli* (Old, D.C. (59) 87)

Fibronectin
Staphylococcus aureus; Serology; Receptors (Rydén, C. (64) 65)

Field method
Rate of denitrification; Acetylene blockage technique; Soils, alder and ash; N_2O production (Struwe, S. (62) 71)

Filamentous hamagglutinin
Bordetella pertussis; Methyl-β-cyclodextrin; Stability (Gorringe, A.R. (55) 315)

Filterable cells
Pseudomonas aeruginosa; Starvation-survival; Seawater (Bakhrouf, A. (59) 187)

Filter-binding
Archaebacterium promoter; Methanogen; DNA-dependent RNA polymerase (Brown, J.W. (60) 131)

Fimbria
Adhesin; Diarrhoea; *Escherichia coli* (Broes, A. (55) 341)

Antigen; Cell surface; *Escherichia coli* (Contrepois, M. (59) 319)

Fimbriae
Salmonella; Serotype; Salinatis; Mannose-resistant and eluting; Haemagglutinin (Yakubu, D.E. (57) 29)

Immunogold staining; Haemagglutination (Sato, M. (59) 325)

Escherichia coli; Antigenic cross-reaction; ETEC (McConnell, M.M. (61) 105)

Fimbrial antigen F165
Escherichia coli; Production; Purification (Fairbrother, J.M. (56) 247)

Fission yeast
Meiosis (Fujioka, H. (60) 45)

Fixed film microcosm
Bacterial survival; Conjugation; Mercury resistance; Riverine bacteria (Rochelle, P.A. (62) 127)

Flagellin
Borrelia burgdorferi; Western blotting; Two-dimensional electrophoresis; N-terminal amino acid analysis; *Spirochaetes*; Serodiagnosis; Phylogeny (Gaßmann, G.S. (60) 101)

Flammulina velutipes
α-Glucose-1-phosphate; Trehalose phosphorylase (Kitamoto, Y. (55) 147)

Flavin
Azotobacter vinelandii; Metronidazole; Cytochrome (Peterson, J.B. (56) 135)

Flocculation
Yeast (Bielecki, S. (61) 189)

Flooding regime
Wastewater; Sand filtration; *Phormidium autumnale* (Katznelson, R. (62) 231)

Fluorescence, in situ
Microscale distribution; Phototrophic bacteria; Pigment; Transmissometry; Spectroradiometry; High-performance liquid chromatography (Steenbergen, C.L.M. (62) 209)

2-Fluorobenzoate
2-Chlorobenzoate; 2-Bromobenzoate; Catechol; Benzoate-1,2-dioxygenase; *Pseudomonas putida* (Engesser, K.H. (60) 143)

Fnr protein
Escherichia coli; Formate hydrogenlyase regulation; *hydC* gene (Cole, J.A. (55) 169)

Folic acid
Chitin; Mixed cultures; Cross-feeding; Thioredoxin; Endproduct inhibition (Pel, R. (62) 191)

Forest fires
Soil microbial biomass; Japanese red pine forest; Chloroform fumigation-incubation method (Tateishi, T. (62) 163)

Formaldehyde oxidation
Methanogenesis from methanol; *Methanosarcina barkeri*; Tetrahydromethanopterin-b; Methanofuran-b (Mahlmann, A. (61) 115)

Formaldehyde resistance
Escherichia coli; Plasmid; Cloning; Expression (Kaulfers, P.-M. (55) 299)

Formate dehydrogenase
Methylotroph; *Mycobacterium gastri* (Izumi, Y. (56) 277)

Formate hydrogenlyase regulation
Escherichia coli; Fnr protein; *hydC* gene (Cole, J.A. (55) 169)

Fosfomycin
Staphylococcus epidermis; Plasmid; Antibiotic resistance (Etienne, J. (61) 133)

Fosfomycin modification
Fosfomycin resistance; Gene probe; Hybridization; Glutathione-S-transferase; Fosfomycin-resistance dispersion (Terán, F.J. (55) 213)

Fosfomycin resistance
Fosfomycin modification; Gene probe; Hybridization; Glutathione-S-transferase; Fosfomycin-resistance dispersion (Terán, F.J. (55) 213)

Fosfomycin-resistance dispersion
Fosfomycin resistance; Fosfomycin modification; Gene probe; Hybridization; Glutathione-S-transferase (Terán, F.J. (55) 213)

FPLC
Legionella pneumophila; Protease; Purification (Rechnitzer, C. (59) 39)

Fractal
Serratia marcescens; Exolipid; Spreading growth (Matsuyama, T. (61) 243)

Fragile yeasts
Electrofusion; Protoplasts (Tsoneva, I. (60) 61)

Fragment F_0
8-Hydroxy-5-deazaflavin; Coenzyme F_{420}; Tetracyclines; *Streptomyces aureofaciens*; *Streptomyces rimosus* (Novotná, J. (59) 241)

Frankia
Actinorhizal symbiosis; *Nif* gene (Simonet, P. (55) 141)

Actinorhiza; DNA restriction banding pattern; Plasmid profile; *Elaeagnus angustifolia*; *Shepherdia argentea*; *Hippophaë rhamnoides* (Dobritsa, S.V. (58) 287)

Hydrogenase; Hyphae; Immunogold localization; Vesicle (Lindblad, P. (60) 311)

Freezing
Desiccation; Dehydration; Temperature stress (Van Laere, A. (63) 201)

Fructan
Oral streptococci; Sucrose metabolism (Aduse-Opoku, J. (59) 279)

Fructose 2,6-diphosphate
Trypanosoma cruzi; Enzyme inhibition (Cazzulo, J.J. (59) 259)

Fructose PTS
Phosphotransferase system; Regulation; Phosphoprotein; Enzyme III^{Glc}; Inducer exclusion (Postma, P.W. (63) 69)

Fructose specific enzyme III
Fructose transport; *fru-lacZ* fusions (Gershanovitch, V.N. (63) 125)

Fructose transport
fru-lacZ fusions; Fructose specific enzyme III (Gershanovitch, V.N. (63) 125)

Fruiting body formation
Myxobacteria; Myxospore; Adenine nucleotides (González, F. (58) 21)

Fruiting induction
Lentinus edodes; AMP, cyclic; Adenylate cyclase (Takagi, Y. (55) 275)

Fumarate reduction
Fermentation; Phototrophic bacteria (Hiraishi, A. (56) 199)

Fungal community
Cellulose decomposition; Tannins; Litter (Savoie, J.-M. (62) 307)

Fungal morphogenesis
Ceratocystis (= Ophiostoma) ulmi; Adenosine 3′:5′-cyclic monophosphate; AMP, cyclic; Yeast-mycelium transition (Brunton, A.H. (60) 49)

Fungal polygalacturonase
Plate assay; Ruthenium red (McKay, A.M. (56) 355)

Fungus
Neocallimastix; Rumen (Breton, A. (58) 309)

Metarhizium anisopliae; Entomopathogen; Protoplast; Transformation; Cosmid (Bernier, L. (60) 261)

Fused protein
Extracellular production; Secretion vector; Alkalophilic *Bacillus* sp.; Calcitonin (Kato, H. (57) 339)

Fusion interferon
Proteus mirabilis; L-forms; *speA* gene; Secretion; Signal peptide processing (Laplace, F. (59) 59)

Fusobacterium nucleatum
Polyglucose utilization; Amino acid fermentation; Sugar metabolism (Robrish, S.A. (55) 29)

Lipopolysaccharide; Lipid A; Polysaccharide; Mitogenicity; Immunoglobulin synthesis (Sveen, K. (64) 29)

Gabaculin
δ-Aminolevulinic acid; tRNA (O'Neill, G.P. (60) 255)

Gallidermin
Lantibiotic; Epidermin; Nucleotide sequence; Post translational modification; *Staphylococcus gallinarum* (Schnell, N. (58) 263)

Ganglioside
Clostridium botulinum; pH; Phospholipid; Botulinum toxin type E (Kamata, Y. (55) 71)

Gastric campylobacter-like organism
Urease; pH profile; *Campylobacter pylori* (Taylor, M.B. (55) 259)

Gastritis
IgG; *Campylobacter* (Van Bohemen, C.G. (55) 321)

Helicobacter pylori; ELISA; Seroepidemiology; Serological screening (Pateraki, E. (64) 129)

Gene cloning
Streptomyces; Carbapenem antibiotic (Nakata, K. (57) 51)

Bacillus subtilis; Glutamine synthetase; *glnA*; Amino acid homology (Nakano, Y. (57) 81)

Bacillus subtilis; Glycerol catabolism; Glycerol kinase (Holmberg, C. (58) 151)

Escherichia coli; F1, F8 fimbriae; Gene mapping (Krallmann-Wenzel, U. (58) 315)

Clostridium acetobutylicum; α-Amylase (Verhasselt, P. (59) 135)

Clostridium thermosulfurogenes; α-Amylase; Thermostable (Haeckel, K. (60) 333)

Clostridium; Plasmid; Transformation; Conjugation; Transposon; Toxins; Fermentation; Gene structure; Gene expression (Young, M. (63) 301)

Gene, *cybB*
Cytochrome b_{561}; *Escherichia coli* (Yamato, I. (56) 21)

Gene expression
Gene regulation; Promoter test vector; *Escherichia coli*; Bacteriophage Mu; Transcriptional fusion (Apfel, C. (55) 65)

Staphylococcus aureus; Extracellular protein (Coleman, G. (61) 247)

Clostridium; Plasmid; Transformation; Conjugation; Transposon; Toxins; Fermentation; Gene cloning; Gene structure (Young, M. (63) 301)

Gene fusion
Hybrid protein; *Omp*C; Protein export; *Escherichia coli* (Saarilahti, H.T. (55) 327)

DNA gyrase; Strict aerobic growth; Anaerobiosis; Nalidixic acid resistance; *gyrA* (Yamamoto, N. (56) 209)

Catabolite repression; β-galactosidase; Anaerobic (Reams, S.G. (56) 231)

Gene mapping
Escherichia coli; F1, F8 fimbriae; Gene cloning (Krallmann-Wenzel, U. (58) 315)

Gene probe
Fosfomycin resistance; Fosfomycin modification; Hybridization; Glutathione-S-transferase; Fosfomycin-resistance dispersion (Terán, F.J. (55) 213)

Gene probes
Escherichia coli; Pig; Verotoxins; Enterotoxins (Mainil, J. (59) 345)

Gene regulation
Promoter test vector; *Escherichia coli*; Bacteriophage Mu; Gene expression; Transcriptional fusion (Apfel, C. (55) 65)

Promoter; Sigma factor; Positive control; Transcription initiation (Thöny, B. (63) 341)

Genes
Escherichia coli; Enterotoxins; Shiga-like toxins; Pathogenesis (Meyer, T. (58) 115)

Gene structure
Clostridium; Plasmid; Transformation; Conjugation; Transposon; Toxins; Fermentation; Gene cloning; Gene expression (Young, M. (63) 301)

Genetic expression
Electroporation; Insecticidal activity; Plasmid; Toxin gene (Lereclus, D. (60) 211)

Genetic instability
DNA repair mutants; *Streptomyces cattleya*; Mitomycin C (Hromic, A. (57) 139)

Genetic stability
Escherichia coli; Chemostat culture; Plasmid (Chew, L.C.K. (56) 101)

Gene transcription
Cytokines; Lymphotoxin; Receptors; Cytotoxicity; Immune regulation; Inflammation (Porter, A.G. (64) 193)

Gene transfer
Methylobacillus flagellatum KT; Obligate methylotroph; Hfr-like donors (Serebrijski, I.G. (59) 203)

Genital tract infection
Diagnosis; Nucleic acid sandwich hybridization; Culture; *Chlamydia trachomatis*; Enzyme immunoassay (Puolakkainen, M. (55) 353)

Genome analysis
Lactic acid bacteria; Pulsed-field gel electrophoresis (Le Bourgeois, P. (59) 65)

Gentamicin
Apramycin; Resistance; Plasmids; Hybridization (Chaslus-Dancla, E. (61) 261)

Germination
Candida albicans; Hydrophobicity; Dimorphism (Hazen, B.W. (57) 167)

Germ tubes
Candida albicans; Human fibrinogen (Annaix, V. (64) 147)

Giardia lamblia
Mice; T cell subsets; IgA; IgM; IgG; Immune effector response; Gut (Khanna, R. (64) 137)

Gibbs free energy
H_2 partial pressure; Syntrophic associations; Interspecies formate transfer (Conrad, R. (62) 21)

Glomerulonephritis
Type IV collagen; *Streptococcus pyogenes* (Kostrzynska, M. (59) 229)

Glucokinase
Enterobacteriaceae; Glucose transport; Phosphotransferase system; Oxidoreductase; Dehydrogenase (Grimont, P.A.D. (63) 109)

Glucose
Phosphate; Regulation; Catabolism; *Pseudomonas cepacia* (Estañol, I. (60) 295)

Glucose dehydrogenase
Pyrroloquinoline quinone; *Acinetobacter calcoaceticus*; (2 Enzymes) (Matsushita, K. (55) 53)

α-Glucose-1-phosphate
Trehalose phosphorylase; *Flammulina velutipes* (Kitamoto, Y. (55) 147)

Glucose transport
Enterobacteriaceae; DNA hybridization (Bouvet, O.M.M. (56) 145)

Enterobacteriaceae; Phosphotransferase system; Oxidoreductase; Dehydrogenase; Glucokinase (Grimont, P.A.D. (63) 109)

Glucosyltransferase
Vancomycin; Antibiotic; Biosynthesis (Zmijewski, Jr., M.J. (59) 129)

Glutamate
Rhizobium spp.; Symbiosis; Carbon metabolism; Catabolite repression; Dicarboxylic acids; cAMP (O'Gara, F. (63) 93)

Glutamate dehydrogenase
Trypanosoma cruzi; NAD; NADP; Purification; Amino acid composition; N-terminal sequence (Cazzulo, J.J. (56) 215)

Klebsiella pneumoniae; Ammonia assimilation; Glutamate synthase; pH; Chemostat culture (Buurman, E.T. (58) 229)

Chlamydomas reinhardtii (Muñoz-Blanco, J. (61) 315)

Glutamate synthase
Synechococcus; Cyanobacteria; Heterologous hybridization (Lightfoot, D.A. (57) 129)

Klebsiella pneumoniae; Ammonia assimilation; Glutamate dehydrogenase; pH; Chemostat culture (Buurman, E.T. (58) 229)

Glutamine synthetase
Ammonia production; *Anabaena variabilis*; mRNA; Mutant strain (Hien, N.T. (56) 337)

Bacillus subtilis; *glnA*; Amino acid homology; Gene cloning (Nakano, Y. (57) 81)

Photosynthetic bacterium; Amino acid levels; *Rhodobacter capsulatus* (Romero, F. (58) 111)

Glutaraldehyde
Bacillus; Spore (Dancer, B.N. (57) 345)

3-hydroxy-3-methyl-Glutaric acid
Pseudomonas fluorescens; Ethionine; Methionine; Monic acid A; Antibiotic; Pseudomonic acid A (Mantle, P.G. (59) 55)

Glutathione
Penicillin; Cephalosporin; *Cephalosporium acremonium*; Blastospore; Actin; Cytochalasins; Cysteine; Reductases (Crabbe, M.J.C. (56) 71)

Glutathione-S-transferase
Fosfomycin resistance; Fosfomycin modification; Gene probe; Hybridization; Fosfomycin-resistance dispersion (Terán, F.J. (55) 213)

Glycerol catabolism
Bacillus subtilis; Gene cloning; Glycerol kinase (Holmberg, C. (58) 151)

Glycerol kinase
Bacillus subtilis; Glycerol catabolism; Gene cloning (Holmberg, C. (58) 151)

Protein phosphorylation; Inducer expulsion; Seryl-phosphorylated HPr (Deutscher, J. (63) 167)

Glycerol metabolism
Dunaliella; Hypoosmotic stress; Osmoregulation (Goyal, A. (61) 145)

***sn*-Glycerol 3-P dehydrogenase**
Conditioning; Acquired osmotolerance; Acquired thermotolerance; Physiological overlap; Heat shock protein; *Saccharomyces cerevisiae* (Trollmo, C. (56) 321)

Glycerol-3-phosphate–phosphate exchange
Glycerolphosphate uptake; Glycerophosphorylethanolamine transport (Brzoska, P. (63) 115)

Glycerolphosphate uptake
Glycerophosphorylethanolamine transport; Glycerol-3-phosphate–phosphate exchange (Brzoska, P. (63) 115)

Glycerophosphorylethanolamine transport
Glycerolphosphate uptake; Glycerol-3-phosphate–phosphate exchange (Brzoska, P. (63) 115)

Glycine betaine
Halophiles; Archaebacteria; Ether lipids; Osmoregulation (Nicolaus, B. (59) 157)

Glycogen
Escherichia coli; Cell size; Cell buoyant density; Macromolecular composition (Mas, J. (57) 231)

Glycolipid
Halobacterium saccharovorum; Polar lipids; ^{13}C NMR. (Lanzotti, V. (55) 223)

Glycolysis
Citric acid production; *Aspergillus niger*; Hexokinase; Phosphofructokinase (Schreferl-Kunar, G. (59) 297)

Glycopeptide
Escherichia coli; Diarrhoeal disease (Sherman, P. (61) 121)

Glycosidases
Crohn's disease; Gnotobiotic rat; Blood group degrading enzymes (Ruseler-van Embden, J.G.H. (58) 37)

Glycosylation
Yeast; Cell wall; Secretion; Tunicamycin (Sanz, P. (57) 265)

Glyoxylate
Acetate; Rhodospirillaceae (Blasco, R. (58) 129)

Glyphosate
Cyanobacterium; Mutation; Heterocyst; Nitrogenase; NH_4^+-transport (Singh, A.K. (60) 187)

Glyprodipeptidase
Virulence; *Bacteroides gingivalis* (Kay, H.M. (57) 93)

Gnotobiotic rat
Crohn's disease; Glycosidases; Blood group degrading enzymes (Ruseler-van Embden, J.G.H. (58) 37)

Gordona aurantiaca
Mycolic acid; Tumor cytotoxicity; Activated macrophage; Liposome (Furukawa, M. (64) 83)

Gossypetin
TP181 plasmids; Bharangin; Curing (Lakshmi, V.V. (57) 275)

gp41
HIV-1; gp120; Envelope protein; HIV-1 polypeptides expressed in *E. coli*; Monoclonal antibody (Larcher, C. (64) 103)

gp120
HIV-1; gp41; Envelope protein; HIV-1 polypeptides expressed in *E. coli*; Monoclonal antibody (Larcher, C. (64) 103)

ppGpp
Streptomyces lividans; Thiopeptin; pIJ702 (Ochi, K. (61) 219)

Gram-negative bacterium
Trimethoprim; Resistance; Faecal bacterium (Lamikanra, A. (59) 275)

Gram-negative opportunistic pathogens
Hydrophobic agents; Cell surface hydrophobicity; *Branhamella catarrhalis* (Gotoh, N. (59) 211)

Gram-positive bacteria
Sugar transport (Fouet, A. (63) 175)

Group A streptococcus
Penicillin tolerance; Kanamycin, high-level resistance to; Conjugative transfer (Lakshmi, T.M. (57) 329)

Group G streptococcus
Cohaemolysin; CAMP-factor; *Streptococcus canis* (Gürtürk, K. (64) 97)

Growth
Staphylococcus aureus; Penicillin-binding protein; β-Lactam antibiotic; Cell wall (Beise, F. (55) 195)

Methanogenic bacteria; Alcohol dehydrogenase; Secondary alcohols; Specificity; Substrates; $NADPH/H^+$; F_{420}; Cyclopentanol (Bleicher, K. (59) 307)

Growth conditions
Enterococcus faecalis; Surface protein; Antigen; Biofilm (Lambert, P.A. (64) 51)

Growth kinetics
Tyzzer's organism; Intracellular parasite (Kawamura, S. (59) 125)

Growth medium
Chromatium; *Rhodobacter*; *Thiocystis*; *Thiocapsa*; Inclusions; Light intensity (Gaju, N. (62) 295)

Grow-through mechanism
Streptomycetes; Membrane filter; Morphological alteration; Peptidoglycan synthesis (Wolf, H. (57) 259)

Gut
Giardia lamblia; Mice; T cell subsets; IgA; IgM; IgG; Immune effector response (Khanna, R. (64) 137)

Gypsum precipitation
Microbial communities; Sediment composition; Ionic composition; Influence of light; *Chloroflexus* (Giani, D. (62) 151)

nifH
Desulfovibrio gigas; Nitrogen fixation (Kent, H.M. (61) 73)

pH
Clostridium botulinum; Ganglioside; Phospholipid; Botulinum toxin type E (Kamata, Y. (55) 71)

Klebsiella pneumoniae; Ammonia assimilation; Glutamate dehydrogenase; Glutamate synthase; Chemostat culture (Buurman, E.T. (58) 229)

Haemagglutination
Fimbriae; Immunogold staining (Sato, M. (59) 325)

Clostridium; Capsule (Baldassarri, L. (60) 1)

Porphyromonas gingivalis; Protease; Erythrocyte lysis; Vesicles (Shah, H.N. (61) 213)

Helicobacter pylori; Mucin (Mentis, A. (64) 125)

Haemagglutinin
Salmonella; Serotype; Salinatis; Fimbriae; Mannose-resistant and eluting (Yakubu, D.E. (57) 29)

Haem attachment
Rhodobacter sphaeroides; Cytochrome c_2; *Escherichia coli*; Protein export (McEwan, A.G. (59) 253)

Haemin
Virulence; Trypsin; Collagen breakdown; Cytotoxin; *Bacteroides gingivalis* (Marsh, P.D. (55) 87)

Haemolytic activity
Serratia marcescens; Lysis (Goluszko, P. (61) 207)

Haloaliphatics
Biodegradation; Biorestoration; Land; Aquifers; Haloaromatics (Morgan, P. (63) 277)

Haloanaerobiaceae
D-BAPA hydrolysis; *Haloanaerobium praevalens*; Endospores (Oren, A. (58) 5)

Haloanaerobium
Anaerobic halophile; Moderate halophile; Eubacteria; Alkalophile (Shiba, H. (57) 191)

Haloanaerobium praecalens
D-BAPA hydrolysis; Haloanaerobiaceae; Endospores (Oren, A. (58) 5)

Haloaromatics
Biodegradation; Biorestoration; Land; Aquifers; Haloaliphatics (Morgan, P. (63) 277)

Halobacterium
Triangular bacterium; Cell plate; Cell division; Cinematography (Hamamoto, T. (56) 221)

Halobacterium saccharovorum
Glycolipid; Polar lipids; ^{13}C NMR. (Lanzotti, V. (55) 223)

Halophiles
Archaebacteria; Ether lipids; Glycine betaine; Osmoregulation (Nicolaus, B. (59) 157)

Hansenula polymorpha
Alcohol oxidase; Heterologous gene expression; Microbody development; *Saccharomyces cerevisiae* (Harder, W. (57) 133)

Malate synthase; Enzyme purification; Peroxisomes (Bruinenberg, P.G. (61) 11)

H_2 concentration
H_2 turnover; Interspecies H_2 transfer; Homoacetogenic bacteria; Fermenting bacteria; Rice (Conrad, R. (62) 265)

Heat-labile enterotoxin
Hemagglutinating activity; Chicken strain; *Escherichia coli* (Sugii, S. (57) 105)

A and B subunits; p*I* point (Tsuji, T. (61) 1)

Heat resistance
Spores; Bacterial spores; Water content; *Bacillus sphaericus* (Beaman, T.C. (58) 1)

Heat shock
DNA damage; 4-Nitroquinoline-*N*-oxide; Protein synthesis; *Chlamydomonas reinhardtii* (Nicholson, P. (60) 283)

Heat shock protein
Conditioning; Acquired osmotolerance; Acquired thermotolerance; Physiological overlap; *sn*-Glycerol 3-P dehydrogenase; *Saccharomyces cerevisiae* (Trollmo, C. (56) 321)

Stringent control; Salt stress (Hecker, M. (58) 125)

Heat shock response
Sulfolobus acidocaldarius; *Thiobacillus ferrooxidans*; Thermotolerance; Protein synthesis; Ethanol (Jerez, C.A. (56) 289)

Heat-stable enterotoxin
Amino acid sequence; Synthetic peptide; *Escherichia coli*; Monoclonal antibody (Svennerholm, A.-M. (55) 23)

Heavy metal
Cyanobacterium; Copper; Immobilization; Uptake (Singh, S.P. (60) 193)

Heavy metal resistance
Resistance plasmid; Cobalt; Nickel resistance (Schmidt, T. (62) 315)

Helicobacter pylori
Mucin; Haemagglutination (Mentis, A. (64) 125)

ELISA; Seroepidemiology; Gastritis; Serological screening (Pateraki, E. (64) 129)

Hemagglutinating activity
Heat-labile enterotoxin; Chicken strain; *Escherichia coli* (Sugii, S. (57) 105)

Hemagglutination
B. fragilis; Adherence (Pruzzo, C. (59) 113)

Heme
Desulfovibrio; Nitrite; Respiration; Phosphorylation; Membranes; Protoporphyrin (Klemm, D.J. (61) 61)

Hemolysin
Actinobacillus pleuropneumoniae; (Purification); (Characterization) (Frey, J. (55) 41)

Listeria (Kreft, J. (57) 197)

Vibrio hollisae; Vh-rTDH (Yoh, M. (61) 171)

Erythrocyte; *Vibrio vulnificus; Vibrio*; Hemolysis; Cytolysin (Yamanaka, H. (61) 251)

Hemolysin excretion
Escherichia coli; Mutant (Muñoa, F. (56) 167)

Hemolysis
Erythrocyte; *Vibrio vulnificus; Vibrio*; Hemolysin; Cytolysin (Yamanaka, H. (61) 251)

Herpetosiphon aurantiacus
Peptidoglycan; Ornithine; Lipopolysaccharide; Phylogeny; Peptidoglycan–polysaccharide complex (Jürgens, U.J. (60) 247)

Heterocyst
Cyanobacterium; Glyphosate; Mutation; Nitrogenase; NH_4^+-transport (Singh, A.K. (60) 187)

Azolla-Anabaena; Oxygen microprobe; Nitrogenase activity (Grilli Caiola, M. (59) 283)

Heterologous gene expression
Alcohol oxidase; Microbody development; *Saccharomyces cerevisiae*; *Hansenula polymorpha* (Harder, W. (57) 133)

Heterologous hybridization
Glutamate synthase; Cyanobacteria; *Synechococcus* (Lightfoot, D.A. (57) 129)

Hexokinase
Citric acid production; *Aspergillus niger*; Glycolysis; Phosphofructokinase (Schreferl-Kunar, G. (59) 297)

Hfr-like donors
Methylobacillus flagellatum KT; Obligate methylotroph; Gene transfer (Serebrijski, I.G. (59) 203)

pH homeostasis
Acholeplasma laidlawii; Membrane vesicles; Na^+/H^+ exchange (Lelong, I. (59) 71)

High antibody level
Spontaneous abortion; Virus (Irvine, L.M. (64) 23)

High-performance liquid chromatography
Microscale distribution; Phototrophic bacteria; Pigment; Transmissometry; Fluorescence, in situ; Spectroradiometry (Steenbergen, C.L.M. (62) 209)

Hippophaë rhamnoides
Frankia; Actinorhiza; DNA restriction banding pattern; Plasmid profile; *Elaeagnus angustifolia*; *Shepherdia argentea* (Dobritsa, S.V. (58) 287)

Histidine
Saccharomyces cerevisiae; Ni-resistance; Amino acid pool (Joho, M. (55) 137)

HIV-1
gp41; gp120; Envelope protein; HIV-1 polypeptides expressed in *E. coli*; Monoclonal antibody (Larcher, C. (64) 103)

HIV-1 polypeptides expressed in *E. coli*
HIV-1; gp41; gp120; Envelope protein; Monoclonal antibody (Larcher, C. (64) 103)

Homeoviscous adaptation
4-Amino-L-arabinose; Temperature adaptation; Lipid A; *Yersinia enterocolitica*; *Salmonella minnesota*; *Proteus mirabilis*; *Chromobacterium violaceum* (Bhagya Lakshmi, S.K. (60) 317)

Homoacetogenic bacteria
H_2 concentration; H_2 turnover; Interspecies H_2 transfer; Fermenting bacteria; Rice (Conrad, R. (62) 265)

Homology
ndv genes; *Rhizobium* sp. (Coronado, C. (59) 289)

Homophthalic acid
Degradation; *Pseudomonas* (Karegoudar, T.B. (58) 305)

Host defense
Bacteria; Phagocyte; Infection (Cross, A.S. (64) 245)

Host restricted expression of CS fimbriae
Colonization factor antigen II; CS3 fimbriae; Enterotoxigenic *Escherichia coli* (Twohig, J. (56) 327)

H_2 partial pressure
Gibbs free energy; Syntrophic associations; Interspecies formate transfer (Conrad, R. (62) 21)

H_2 production
Nif^- mutants; *Rhodobacter capsulatus*; Continuous culture (Willison, J.C. (56) 61)

pH profile
Urease; *Campylobacter pylori*; Gastric campylobacter-like organism (Taylor, M.B. (55) 259)

HPr(Ser) kinase/HPr(Ser-P) phosphatase
Sugar transport; Protein phosphorylation; Phosphotransferase system (Reizer, J. (63) 149)

H_2 turnover
H_2 concentration; Interspecies H_2 transfer; Homoacetogenic bacteria; Fermenting bacteria; Rice (Conrad, R. (62) 265)

H_2 turnover rate constants
Enrichment and isolation; Cardinal temperatures; Chloroform inhibition; Methanogenic environments (Conrad, R. (62) 285)

Human fibrinogen
Candida albicans; Germ tubes (Annaix, V. (64) 147)

Human Ig
Pseudomonas aeruginosa infection; Lethality (Collins, M.S. (64) 263)

Human IgG
Staphylococcal infection; Opsonisation (Monteil, M.A. (64) 259)

Human lymphoblastoid cell
Interferon messenger RNA; Namalva; Sendai virus; Interferon synthesis (Mahmoudi, M. (55) 249)

Human monocyte receptors
Activation; Cytotoxicity (Cottrell, B. (64) 333)

Human neutrophil
Legionella pneumophila; Amoeba (Halablab, M.A. (64) 295)

Human polymorphonuclear leucocyte
Porphyromonas gingivalis (Wilton, J.M.A. (64) 285)

Human small intestine
Enterotoxigenic *Escherichia coli*; *Salmonella typhi*; Adherence; Colonization factor antigen I, II (Yamamoto, T. (55) 335)

Human vaccination
Leptospira interrogans; Antibody response (Chapman, A.J. (64) 111)

Hybridization
Fosfomycin resistance; Fosfomycin modification; Gene probe; Glutathione-S-transferase; Fosfomycin-resistance dispersion (Terán, F.J. (55) 213)

Apramycin; Gentamicin; Resistance; Plasmids (Chaslus-Dancla, E. (61) 261)

Hybridization analysis
Serotype; Insect specificity (Visser, B. (58) 121)

Hybrid organisms
Chlorobenzoate utilization; Chlorocatechol degrading enzymes (Hartmann, J. (61) 17)

Hybrid protein
*Omp*C; Protein export; Gene fusion; *Escherichia coli* (Saarilahti, H.T. (55) 327)

Bacteriocin release protein; Cell lysis; Culture turbidity; Protein export; Protein localization (Luirink, J. (58) 25)

Hydrogenase
Frankia; Hyphae; Immunogold localization; Vesicle (Lindblad, P. (60) 311)

Hydrogen metabolism
Tritium uptake (Fu, C. (59) 331)

Hydrogen partial pressure
Proton reduction; Methanogenesis; Syntrophic coculture; Thermodynamics (Seitz, H.-J. (55) 119)

Hydrophobic agents
Cell surface hydrophobicity; Gram-negative opportunistic pathogens; *Branhamella catarrhalis* (Gotoh, N. (59) 211)

Hydrophobicity
Candida albicans; Dimorphism; Germination (Hazen, B.W. (57) 167)

Hydrophobicity assays
Renibacterium salmoninarum; Salinity; Culture medium (Bandín, I. (60) 71)

poly-β-Hydroxybutyric acid
Staphylococci (Szewczyk, E. (61) 279)

8-Hydroxy-5-deazaflavin
Coenzyme F_{420}; Fragment F_0; Tetracyclines; *Streptomyces aureofaciens*; *Streptomyces rimosus* (Novotná, J. (59) 241)

Hydroxy fatty acid
Lipopolysaccharide; Lipid A (Arata, S. (60) 219)

Hydroxylamine
Methanotroph; Nitrification; Ammonium oxidation; Nitrite (Megraw, S.R. (62) 359)

Methanotroph; *Methylobacillus; Pseudomonas*; Methanol; Nitrite; Nitrate (Megraw, S.R. (62) 367)

Hydroxylamine assimilation
Nitrite ammonification; Nitrite reductase (Schirmer, N. (60) 343)

6-Hydroxynicotinate dehydrogenase
Bactopterin; Molybdenum cofactor; Nicotine dehydrogenase; 2-furoyl-Coenzyme A dehydrogenase (Nagel, M. (60) 323)

6-Hydroxynicotinic acid dehydrogenase
Nicotinate degradation; Molybdenum; Nicotinic acid dehydrogenase; Chlorate-resistance (Nagel, M. (59) 147)

8-hydroxy-2-oxo-2H-1-benzopyran-4-carboxylic acid
Degradation of quinoline-4-carboxylic acid; Chemical mutagenesis; *Microbacterium* sp.; 2-oxo-1,2-dihydro-quinoline-4-carboxylic acid (Röger, P. (57) 279)

4-Hydroxyphenylacetate catabolism
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Lactobacillus helveticus
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Lactobacillus parabuchneri
DNA-DNA hybridization; Taxonomy; *Lactobacillus malefermentans* (Farrow, J.A.E. (55) 163)

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Lactococcus lactis* subsp. *lactis
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Lectinoid enzymes
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Lectinoid toxins
Lectin function; Microbial toxins; Lectinoid enzymes (Gilboa-Garber, N. (63) 211)

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Lymphocyte migration
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Phagosome-lysosome fusion; γ-Interferon; *Salmonella typhimurium* (Ishibashi, Y. (64) 75)

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metC
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Methane oxidation
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Methanogenesis from methanol
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Methanogenic bacteria
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Methanogenic substrate
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Methanogens
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Methanol
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Methanosarcina barkeri
Methanogenesis; Detergent sodium dodecylbenzene sulphonate; Anaerobic digestion (Khalil, E.F. (57) 313)

Methanogenesis from methanol; Formaldehyde oxidation; Tetrahydromethanopterin-b; Methanofuran-b (Mahlmann, A. (61) 115)

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Methylobacillus; Pseudomonas; Methanol; Hydroxylamine; Nitrite; Nitrate (Megraw, S.R. (62) 367)

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Methylbutanediol
Pelobacter carbinolicus; Methylacetoin; Acetoin cleavage; Butanediol cycle; Acetoin : DCPIP oxidoreductase (Oppermann, F.B. (55) 47)

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Methylobacillus
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***Methylobacillus flagellatum* KT**
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Monic acid A
Pseudomonas fluorescens; Ethionine; Methionine; 3-hydroxy-3-methyl-Glutaric acid; Antibiotic; Pseudomonic acid A (Mantle, P.G. (59) 55)

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MRE haemagglutinin
Mouse and rat erythrocytes; Fibrillae; Enteroadherent-aggregative strains of *E. coli* (Old, D.C. (59) 87)

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Methanogens; Archaebacteria; *Methanobacterium thermoautotrophicum*; Cell walls; Peptidoglycan; Pseudomurein; Biosynthesis (Hartmann, E. (61) 323)

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Phage lysis protein; Penicillin-binding protein (Ursinus-Wössner, A. (57) 75)

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Mycobacterium paratuberculosis
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Mycobactin
Iron metabolism; *Mycobacterium neoaurum*; Iron-repressible envelope proteins (Sritharan, M. (60) 183)

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Myxospore
Myxobacteria; Fruiting body formation; Adenine nucleotides (González, F. (58) 21)

NAD
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NADH:Fe(III)EDTA oxidoreductase
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NADH oxidation
Desulfovibrio; Dissimilatory sulfate reduction; NADH dehydrogenase; Menaquinone (Kremer, D.R. (58) 43)

NAD kinase activity
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NADP
Trypanosoma cruzi; Glutamate dehydrogenase; NAD; Purification; Amino acid composition; N-terminal sequence (Cazzulo, J.J. (56) 215)

Isocitrate dehydrogenase; *Rhodomicrobium vannielli*; NAD; Dual specificity (Leyland, M.L. (58) 165)

$NADPH/H^+$
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Na^+/H^+ exchange
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Nalidixic acid resistance
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Naphthalene catabolism
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***ndv* genes**
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Necrotizing toxin
Verotoxin; Serotypes; Antibiotic resistance (González, E.A. (60) 31)

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NH_4^+-transport
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Nickel resistance
Alcaligenes eutrophus; Plasmid; Nickel efflux (Sensfuss, C. (55) 295)

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Nicotinate degradation
Molybdenum; Nicotinic acid dehydrogenase; 6-Hydroxynicotinic acid dehydrogenase; Chlorate-resistance (Nagel, M. (59) 147)

Nicotine dehydrogenase
Bactopterin; Molybdenum cofactor; 6-Hydroxynicotinate dehydrogenase; 2-furoyl-Coenzyme A dehydrogenase (Nagel, M. (60) 323)

Nicotinic acid dehydrogenase
Nicotinate degradation; Molybdenum; 6-Hydroxynicotinic acid dehydrogenase; Chlorate-resistance (Nagel, M. (59) 147)

***Nif* gene**
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Nitrate ammonification
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Nitrification
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Methanotroph; Nitrification; Ammonium oxidation; Hydroxylamine (Megraw, S.R. (62) 359)

Methanotroph; *Methylobacillus*; *Pseudomonas*; Methanol; Hydroxylamine; Nitrate (Megraw, S.R. (62) 367)

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Nitrite reductase
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Nitrogen cycling in minesoils
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(Nitrogen source)
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Nitrous oxide production
Nitrogen cycling in minesoils; Nitrate-reducing bacteria; Denitrification (Shirey, J.J. (62) 59)

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2-Deoxyglucose; Internal pH; *Saccharomyces cerevisiae* (Loureiro-Dias, M.C. (57) 25)

***Nocardioides fastidiosa* sp. nov.**
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Contaminating proteins; Inclusion bodies; *Escherichia coli* (Veeraragavan, K. (61) 149)

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Mycobacterium bovis; Protein MPB70 (Terasaka, K. (58) 273)

Mycobacteria; rRNA (Estrada-G, I.C.E. (61) 285)

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Butyrivibrio fibrisolvens; L-altrose; 1,6-anhydroaltrose; Extracellular polysaccharides; Alditol acetates (Stack, R.J. (56) 1)

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***Omp*C**
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Operator mutations
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Surface LTA; ELISA (Hogg, S.D. (58) 239)

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Polyhydroxyalkanoate
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Prochlorothrix hollandica
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4-Amino-L-arabinose; Homeoviscous adaptation; Temperature adaptation; Lipid A; *Yersinia enterocolitica*; *Salmonella minnesota*; *Chromobacterium violaceum* (Bhagya Lakshmi, S.K. (60) 317)

Proton reduction
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Protoplast
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Metarhizium anisopliae; Entomopathogen; Fungus; Transformation; Cosmid (Bernier, L. (60) 261)

Protoplast formation
Thermophilic bacterium; *Clostridium* sp. (Pettinari, M.J. (58) 255)

Protoplasts
Electrofusion; *Aspergillus nidulans* (Lynch, P.T. (59) 225)

Electrofusion; Fragile yeasts (Tsoneva, I. (60) 61)

Protoplast transformation
Lactococcus lactis subsp. *lactis*; Conjugation; Electroporation; Restriction/modification; pIP501. (Langella, P. (59) 301)

Protoporphyrin
Heme; *Desulfovibrio*; Nitrite; Respiration; Phosphorylation; Membranes (Klemm, D.J. (61) 61)

Protozoa
Mortality; *Carchesium*; *Epistylis*; *Chaetogaster*; *Eosphora* (Kusuoka, Y. (62) 7)

Pseudomonas
Bacterium; Cinnamaldehyde; Dehydrogenase; Lignin; Vanillic acid; Vanillin; Vanillyl alcohol (Pelmont, J. (57) 109)

Degradation; Homophthalic acid (Karegoudar, T.B. (58) 305)

Outer membrane; Permeability; Drug resistance; Opportunistic pathogen (Yamazaki, E. (60) 85)

Methanotroph; *Methylobacillus*; Methanol; Hydroxylamine; Nitrite; Nitrate (Megraw, S.R. (62) 367)

Pseudomonas aeruginosa
Phospholipase C induction; Choline; Betaine (Lucchesi, G.I. (57) 335)

Protein G; Iron concentration (Yates, J.M. (58) 259)

Protein F-deficient mutant; Osmotic shock; Electron microscopic studies (Gotoh, N. (59) 51)

Starvation-survival; Seawater; Filterable cells (Bakhrouf, A. (59) 187)

Chlorhexidine; Azolectin; *Escherichia coli* (Fitzgerald, K.A. (60) 327)

Calcium; Alginate; Tobramycin (Hoyle, B.D. (60) 339)

***Pseudomonas aeruginosa* infection**
Lethality; Human Ig (Collins, M.S. (64) 263)

Pseudomonas cepacia
Phosphate; Regulation; Glucose; Catabolism (Estañol, I. (60) 295)

Pseudomonas fluorescence
Broad-host-range plasmid; Conjugation; Transposon mutagenesis; Cosmid mobilization; Rhizosphere (Voisard, C. (55) 9)

Ethionine; Methionine; 3-hydroxy-3-methyl-Glutaric acid; Monic acid A; Antibiotic; Pseudomonic acid A (Mantle, P.G. (59) 55)

Degradative plasmids; Styrene degradation (Ruzzi, M. (59) 337)

Nickel cyanide; (Nitrogen source) (Dorr, P.K. (60) 289)

Pseudomonas fragi
Sodium chloride; Phospholipids; Bacterial growth rates (Roller, S.D. (58) 71)

Pseudomonas putida
Ion chromatography; Dehalogenase enzyme assay (Smith, J.M. (57) 71)

2-Chlorobenzoate; 2-Bromobenzoate; 2-Fluorobenzoate; Catechol; Benzoate-1,2-dioxygenase (Engesser, K.H. (60) 143)

2,4-Xylenol; *p*-Cresol; Catabolic plasmid (Dean, H.F. (61) 153)

***Pseudomonas* sp.**
Selenate reduction; Anaerobic respiration (Macy, J.M. (61) 195)

***Pseudomonas* sp. strain WR401**
Methylsalicylate; o-Toluate; *Meta*-pathway; Chlorobenzoate conversion (Engelberts, K. (59) 35)

Pseudomonas stutzeri
Mercury resistance; Plasmid (Barbieri, P. (62) 375)

Pseudomonas vesicularis
Lipid; Fatty acid (Barnes, A. (59) 101)

Pseudomonic acid A
Pseudomonas fluorescens; Ethionine; Methionine; 3-hydroxy-3-methyl-Glutaric acid; Monic acid A; Antibiotic (Mantle, P.G. (59) 55)

Pseudomurein
Methanogens; Archaebacteria; *Methanobacterium thermoautotrophicum*; Cell walls; Peptidoglycan; Murein; Biosynthesis (Hartmann, E. (61) 323)

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Dictyostelium discoideum; Membrane potential; AMP, cyclic (Kitami, M. (55) 269)

PTS
Inorganic phosphate; Phosphorylation (Peterkofsky, A. (63) 103)

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PTS-carbohydrates
Chemotaxis; Molecular mechanisms; Enteric bacteria (Lengeler, J.W. (63) 81)

PTS evolution
Catabolite inhibition; Phosphoenolpyruvate (Kornberg, H.L. (63) 193)

***pts* genes**
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Pulsed-field gel electrophoresis
Genome analysis; Lactic acid bacteria (Le Bourgeois, P. (59) 65)

Purification
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Escherichia coli; Fimbrial antigen F165; Production (Fairbrother, J.M. (56) 247)

Legionella pneumophila; Protease; FPLC (Rechnitzer, C. (59) 39)

Phosphatidylinositol-specific phospholipase C; Specific activity; PI-glycan hydrolysis; Catalytic properties (Volwerk, J.J. (61) 237)

Staphylococcus aureus; Endo-β-*N*-acetylglucosaminidase; Dye-ligand affinity chromatography (Sugai, M. (61) 267)

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Thiocapsa roseopersicina; Purple sulfur bacteria; Profiles of oxygen and inorganic sulfur compounds (Van Gemerden, H. (62) 87)

Purple sulfur bacteria
Purple beaches; *Thiocapsa roseopersicina*; Profiles of oxygen and inorganic sulfur compounds (Van Gemerden, H. (62) 87)

Microcolonies; Aggregate formation; Recolonization (Van Gemerden, H. (62) 111)

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Brush border membrane; *Escherichia coli*; Pili immunization (Garg, U.C. (57) 155)

Pyrimidine biosynthesis
Mycobacterium leprae (Wheeler, P.R. (57) 185)

Pyrimidine scavenging
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Archaebacterium; Respiratory lipoquinone; Menaquinone; Chemotaxanomy (Tundall, B.J. (60) 251)

Pyrroloquinoline quinone
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Pyruvate carboxylase
Aspergillus niger; Enzyme location (Purohit, H.J. (55) 129)

Pyruvate decarboxylase
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Pyruvate dehydrogenase complex
Multienzyme complexes; Dihydrolipoamide acetyltransferase; Lipoyl domains; Catalytic domains; Intragenic complementation; *Escherichia coli* (Russell, G.C. (60) 267)

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Recombinant DNA
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Recombinant proteins
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Anaerobic polymer degradation; Chitin; Thioredoxin (Pel, R. (62) 349)

Red selenium
Thiobacillus ferrooxidans; Sulphur reduction (Bacon, M. (58) 189)

Reductases
Penicillin; Cephalosporin; *Cephalosporium acremonium*; Blastospore; Actin; Cytochalasins; Cysteine; Glutathione (Crabbe, M.J.C. (56) 71)

Reductive pentose phosphate cycle
Reversed respiratory electron transport; Chemolithoautotrophy; Nitrogen fixation; *Bradyrhizobium japonicum* (Häger, K.-P. (56) 189)

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metC; Operator mutations; *lacZ* fusions (Park, Y.M. (60) 137)

Phosphate; Glucose; Catabolism; *Pseudomonas cepacia* (Estañol, I. (60) 295)

Anabaena doliolum; Cyanobacterium; Urea-uptake (Singh, S. (61) 199)

Phosphotransferase system; Fructose PTS; Phosphoprotein; Enzyme III^{Glc}; Inducer exclusion (Postma, P.W. (63) 69)

TCA cycle; PHB; Fermentation (McDermott, T.R. (63) 327)

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Hydrophobicity assays; Salinity; Culture medium (Bandin, I. (60) 71)

Repeated sequences
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Xylaria hypoxylon; Ascomycotina; Basidiomycotina (Boddy, L. (62) 173)

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Rep Protein
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Repression
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Trimethoprim; Faecal bacterium; Gram-negative bacterium (Lamikanra, A. (59) 275)

Apramycin; Gentamicin; Plasmids; Hybridization (Chaslus-Dancla, E. (61) 261)

Resistance plasmid
Heavy metal resistance; Cobalt; Nickel resistance (Schmidt, T. (62) 315)

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Photosynthetic bacteria; *Rhodobacter capsulatus*; Methionine sulfoximine (Romero, F. (61) 203)

Respiration
Heme; *Desulfovibrio*; Nitrite; Phosphorylation; Membranes; Protoporphyrin (Klemm, D.J. (61) 61)

Respiratory chains
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Respiratory lipoquinone
Archaebacterium; *Pyrobaculum islandicum*; Menaquinone; Chemotaxonomy (Tindall, B.J. (60) 251)

Restriction and modification
Streptococcus lactis; Phage restriction; *Streptococcus cremoris* W56 (Josephsen, J. (59) 161)

Restriction endonuclease
Acetobacter (Tagami, H. (56) 161)

Agarose gel electrophoresis; DNA; Infected larvae; Insects (Hamelin, C. (60) 233)

Restriction map
Brucella phages; DNA (Segondy, M. (56) 177)

Recombinant DNA; Ribosomal RNA genes; Mycobacterium (Bercovier, H. (57) 125)

Restriction/modification
Lactococcus lactis subsp. *lactis*; Conjugation; Protoplast transformation; Electroporation; pIP501. (Langella, P. (59) 301)

Reversed respiratory electron transport
Chemolithoautotrophy; Reductive pentose phosphate cycle; Nitrogen fixation; *Bradyrhizobium japonicum* (Häger, K.-P. (56) 189)

Reverse gyrase
Archaebacterium; Topoisomerase; Thermoacidophiles; DNA gyrase (Collin, R.G. (55) 235)

Rhizobium
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Rhizobium galegae
Lipopolysaccharide; Protein pattern; Serology (Lipsanen, P. (58) 323)

Rhizobium leguminosarum
glnB; Nitrogen metabolism (Holtel, A. (58) 203)

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***Rhizobium leguminosarum* IARI 102**
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Rhizobium meliloti
Lipopolysaccharide; Sialic acid, HPLC (Defives, C. (57) 203)

***Rhizobium* sp.**
Homology; *ndv* genes (Coronado, C. (59) 289)

Poly(β-hydroxyalkanoate); Biosynthesis; Accumulation (Tombolini, R. (60) 299)

***Rhizobium* spp.**
Symbiosis; Carbon metabolism; Catabolite repression; Dicarboxylic acids; Glutamate; cAMP (O'Gara, F. (63) 93)

Rhizosphere
Broad-host-range plasmid; Conjugation; Transposon mutagenesis; Cosmid mobilization; *Pseudomonas fluorescence* (Voisard, C. (55) 9)

Rhodobacter
Chromatium; *Thiocystis*; *Thiocapsa*; Inclusions; Light intensity; Growth medium (Gaju, N. (62) 295)

Rhodobacter capsulatus
Nif$^-$ mutants; Continuous culture; H_2 production (Willison, J.C. (56) 61)

Glutamine synthetase; Photosynthetic bacterium; Amino acid levels (Romero, F. (58) 111)

Photosynthetic bacteria; Methionine sulfoximine; Resistant strain (Romero, F. (61) 203)

Rhodobacter sphaeroides
rbpL gene; Carbon dioxide fixation; Photosynthetic bacteria (Wagner, S.J. (55) 217)

Cytochrome c_2; *Escherichia coli*; Haem attachment; Protein export (McEwan, A.G. (59) 253)

Rhodomicrobium vannielii
Protein phosphorylation; Protein kinase; Chlorpromazine (Turner, A.M. (57) 301)

Isocitrate dehydrogenase; NAD; NADP; Dual specificity (Leyland, M.L. (58) 165)

Rhodopseudomonas viridis
Pigement-binding protein; Membrane vesicle; Bacterial photosynthetic apparatus (Tadros, M.H. (55) 243)

Rhodoquinone
Quinone profiles; Activated sludge bacteria; Chemotaxonomy (Hiraishi, A. (58) 55)

Rhodospirillaceae
Acetate; Glyoxylate (Blasco, R. (58) 129)

Rhodotorula minuta
Membrane-bound enzyme; Isobutene-forming enzyme; Cytochrome P-450 (Fujii, T. (58) 199)

Ribosomal mutant
Escherichia coli (Mikkola, R. (56) 265)

Ribosomal RNA genes
Recombinant DNA; Mycobacterium; Restriction map (Bercovier, H. (57) 125)

Ribosomes
Streptogramins; *Streptomyces*; Antibiotics; Inactivating enzymes; Vernamycins (Fierro, J.F. (58) 243)

Ribulose bisphosphate carboxylase
Carbon dioxide fixation; *Thiobacillus versutus*; *Synechococcus* PCC 7942; CO_2-concentrating mechanisms (Karagouni, A.D. (58) 179)

Rice
H_2 concentration; H_2 turnover; Interspecies H_2 transfer; Homoacetogenic bacteria; Fermenting bacteria (Conrad, R. (62) 265)

Riverine bacteria
Bacterial survival; Conjugation; Fixed film microcosm; Mercury resistance (Rochelle, P.A. (62) 127)

mRNA
Ammonia production; *Anabaena variabilis*; Glutamine synthetase; Mutant strain (Hien, N.T. (56) 337)

rRNA
Mycobacteria; Nucleotide sequence (Estrada-G, I.C.E. (61) 285)

tRNA
δ-Aminolevulinic acid; Gabaculin (O'Neill, G.P. (60) 255)

Root proliferation
Legume; *Rhizobium*; Nodule (Jeddi, F.B. (59) 77)

***R*-plasmid**
Corynebacterium diphtheria; Macrolide-lincosamide-streptogramin B resistance; Erythromycin resistance; Methylase gene; Spontaneous deletion (Serwold-Davis, T.M. (56) 7)

Conjugation; Enterobacteriaceae (Jayaratne, A.H.G.P. (62) 79)

Rumen
Fungus; *Neocallimastix* (Breton, A. (58) 309)

Ruminal bacteria
Oxalic acid; Ruminant adaptation; Oxalate degradation; *Oxalobacter formigenes* (Daniel, S.L. (62) 329)

Ruminant adaptation
Oxalic acid; Oxalate degradation; Ruminal bacteria; *Oxalobacter formigenes* (Daniel, S.L. (62) 329)

Ruthenium red
Plate assay; Fungal polygalacturonase (McKay, A.M. (56) 355)

Saccharomyces cerevisiae
Ni-resistance; Amino acid pool; Histidine (Joho, M. (55) 137)

Conditioning; Acquired osmotolerance; Acquired thermotolerance; Physiological overlap; *sn*-Glycerol 3-P dehydrogenase; Heat shock protein (Trollmo, C. (56) 321)

2-Deoxyglucose; NMR, ^{31}P; Internal pH (Loureiro-Dias, M.C. (57) 25)

Alcohol oxidase; Heterologous gene expression; Microbody development; *Hansenula polymorpha* (Harder, I.K.M.V.I.L.W. (57) 133)

Ketopantoyl lactone reductase; Conjugated polyketone reductase (Hata, H. (58) 87)

pho3 mutant; Acid phosphatase; Thiamin-binding protein; Thiamin phosphates transport (Nosaka, K. (60) 55)

Autolysis; Cell wall surface; Plasma membrane; Ultrastructure (Takeo, K. (61) 297)

Bacterial infections; Viral infections; Non-specific resistance (Bizzini, B. (64) 155)

Salicylate
Enrichment; Dibenzodioxin; Dibenzofuran degradation; Cometabolism (Strubel, V. (58) 233)

Salicylate-hydroxylase
Naphthalene catabolism; Catechol-2,3-dioxygenase (García-Valdés, E. (61) 301)

Salinatis
Haemagglutination; *Salmonella*; Serotype; Fimbriae; Mannose-resistant and eluting (Yakubu, D.E. (57) 29)

Salinity
Renibacterium salmoninarum; Hydrophobicity assays; Culture medium (Bandin, I. (60) 71)

Methane; Sulfate; Methanogenic substrate; Methane oxidation; Microbial mats (Giani, D. (62) 143)

Salivary component
Streptococcus mutans; Cell wall protein; Affinity chromatography (Ackermans, F. (55) 279)

Salmonella
Serotype; Salinatis; Fimbriae; Mannose-resistant and eluting; Haemagglutinin (Yakubu, D.E. (57) 29)

Virulence plasmid; DNA hybridization (Korpela, K. (58) 49)

Salmonella enteritidis
Phage type 4; Virulence; Plasmids (Chart, H. (58) 299)

LPS; Virulence; Plasmids (Chart, H. (60) 37)

Salmonella minnesota
4-Amino-L-arabinose; Homeoviscous adaptation; Temperature adaptation; Lipid A; *Yersinia enterocolitica*; *Proteus mirabilis*; *Chromobacterium violaceum* (Bhagya Lakshmi, S.K. (60) 317)

Salmonella typhi
Enterotoxigenic *Escherichia coli*; Adherence; Colonization factor antigen I, II; Human small intestine (Yamamoto, T. (55) 335)

Salmonella typhimurium; Phagocytosis (Ishibashi, Y. (64) 89)

Salmonella typhimurium
Siderophore production (Aznar, R. (57) 7)

Peptidase; Protease; *Escherichia coli* (Lazdunski, A.M. (63) 265)

Macrophage; Phagosome-lysosome fusion (Ishibashi, Y. (64) 35)

Phagosome-lysosome fusion; Macrophage; γ-Interferon (Ishibashi, Y. (64) 75)

Salmonella typhi; Phagocytosis (Ishibashi, Y. (64) 89)

Salt adaptation
Bacterial growth; Protein synthesis; *Deleya halophila* (Economou, A. (62) 103)

Salted fish
Preserved foods; Nasopharyngeal cancer; Chinese (Yu, M.C. (64) 235)

Salt requiring methanogens
Isolation; Characterization; Activity (Kadam, P.C. (62) 343)

Salt stress
Stringent control; Heat shock proteins (Hecker, M. (58) 125)

Sand filtration
Wastewater; Flooding regime; *Phormidium autumnale* (Katznelson, R. (62) 231)

Sclerotinia sclerotiorum
Oxalic acid production (Marciano, P. (61) 57)

SDS PAGE
Sheep antibody; *Pasteurella haemolytica*; Antigen; Immunoblotting (Donachie, W. (56) 271)

Identification; *Candida albicans* (Bruneau, S. (58) 329)

Lipopolysaccharide; Sodium deoxycholate-polyacrylamide gel electrophoresis (Komuro, T. (60) 79)

Seawater
Pseudomonas aeruginosa; Starvation-survival; Filterable cells (Bakhrouf, A. (59) 187)

Secondary alcohols
Methanogenic bacteria; Alcohol dehydrogenase; Specificity; Substrates; $NADPH/H^+$; F_{420}; Cyclopentanol; Growth (Bleicher, K. (59) 307)

Secondary metabolism
Enzyme activation; Feedback regulation; Alkaloid; *Penicillium cyclopium* (Roos, W. (59) 27)

Secondary tumor
Enterobacter cloacae; Crown gall tumor; Bean stem (Beltrá, R. (55) 203)

Secretion
Yeast; Cell wall; Tunicamycin; Glycosylation (Sanz, P. (57) 265)

O-linked sugars; Yeast (Mormeneo, S. (57) 271)

Proteus mirabilis; L-forms; Fusion interferon; *speA* gene; Signal peptide processing (Laplace, F. (59) 59)

Secretion vector
Extracellular production; Alkalophilic *Bacillus* sp.; Fused protein; Calcitonin (Kato, H. (57) 339)

Sediment composition
Microbial communities; Ionic composition; Gypsum precipitation; Influence of light; *Chloroflexus* (Giani, D. (62) 151)

Selenate reduction
Pseudomonas sp.; Anaerobic respiration (Macy, J.M. (61) 195)

Sendai virus
Interferon messenger RNA; Human lymphoblastoid cell; Namalva; Interferon synthesis (Mahmoudi, M. (55) 249)

***S. epidermidis* (MRSE)**
Staphylococcus aureus (MRSA); Immunoassay; Penicillin-binding protein; Immunoblotting; Monoclonal antibody (O'Hara, D.M. (57) 97)

Sequence
Maltogenic amylase; Cloning; *Bacillus subtilis* (Diderichsen, B. (56) 53)

Serendipity
Sialic acid; Sugar transport; Phosphotransferase system; Diauxie (Roseman, S. (63) 3)

Serodiagnosis
Borrelia burgdorferi; Flagellin; Western blotting; Two-dimensional electrophoresis; N-terminal amino acid analysis; *Spirochaetes*; Phylogeny (Gaßmann, G.S. (60) 101)

Seroepidemiology
Helicobacter pylori; ELISA; Gastritis; Serological screening (Pateraki, E. (64) 129)

Serological screening
Helicobacter pylori; ELISA; Seroepidemiology; Gastritis (Pateraki, E. (64) 129)

Serology
Lipopolysaccharide; Protein pattern; *Rhizobium galegae* (Lipsanen, P. (58) 323)

Staphylococcus aureus; Fibronectin; Receptors (Rydén, C. (64) 65)

Serotype
Salmonella; Fimbriae; Mannose-resistant and eluting; Salinatis; Haemagglutinin (Yakubu, D.E. (57) 29)

Clonal hypothesis; Lipopolysaccharide O-antigen; Southern hybridization (Beger, D.W. (57) 317)

Hybridization analysis; Insect specificity (Visser, B. (58) 121)

Verotoxin; Necrotizing toxin; Antibiotic resistance (González, E.A. (60) 31)

Serratia marcescens
Haemolytic activity; Lysis (Goluszko, P. (61) 207)

Exolipid; Spreading growth; Fractal (Matsuyama, T. (61) 243)

Seryl-phosphorylated HPr
Protein phosphorylation; Inducer expulsion; Glycerol kinase (Deutscher, J. (63) 167)

Sewage
Disinfection; UV-irradiation; Chlorine; Bacteriophages; Tap water; *Bacteroides fragilis* (Tartera, C. (56) 313)

Antibiotic resistance; Virulence determinants; Aerobactin (Gonzalo, M.P. (59) 93)

Shake agar technique
Marine estuarine environment; Denitrifying; Colourless sulphur-oxidising bacteria (Bharathi, P.A.L. (62) 335)

Sheep antibody
Pasteurella haemolytica; Antigen; SDS PAGE; Immunoblotting (Donachie, W. (56) 271)

Shepherdia argentea
Frankia; Actinorhiza; DNA restriction banding pattern; Plasmid profile; *Elaeagnus angustifolia*; *Hippophaë rhamnoides* (Dobritsa, S.V. (58) 287)

Shiga-like toxin
Shigella sp.; *Escherichia coli*; Outer membrane (Sharma, K. (55) 105)

Edema disease; DNA hybridization; Enterohemorrhagic *Escherichia coli* (Meyer, T. (57) 247)

Escherichia coli; Enterotoxins; Genes; Pathogenesis (Meyer, T. (58) 115)

***Shigella* sp.**
Escherichia coli; Outer membrane; Shiga-like toxin (Sharma, K. (55) 105)

Shuttle plasmid
Escherichia coli; Bifunctional vectors; Conjugal mobilization; *Bacteroides*; Clindamycin resistance; Transposon Tn*501* (Pheulpin, P. (55) 15)

Shuttle vector
Streptomyces; Positive selection (Hill, R.T. (57) 223)

Sialic acid
Serendipity; Sugar transport; Phosphotransferase system; Diauxie (Roseman, S. (63) 3)

Sialic acid, HPLC
Rhizobium meliloti; Lipopolysaccharide (Defives, C. (57) 203)

Siderophore
Rhizobium leguminosarum IARI 102; Iron; 2,3-DHBA (Patel, H.N. (56) 131)

Siderophore production
Salmonella typhimurium (Aznar, R. (57) 7)

Sigma factor
Gene regulation; Promoter; Positive control; Transcription initiation (Thöny, B. (63) 341)

Signal peptide processing
Proteus mirabilis; L-forms; Fusion interferon; *speA* gene; Secretion (Laplace, F. (59) 59)

S-layer
Bacillus brevis; Cell wall (Gruber, K. (56) 113)

Sodium chloride
Phospholipids; *Pseudomonas fragi*; Bacterial growth rates (Roller, S.D. (58) 71)

Sodium deoxycholate-polyacrylamide gel electrophoresis
Lipopolysaccharide; SDS-PAGE (Komuro, T. (60) 79)

Sodium dependent metabolism
Peptostreptococcus productus (strain Marburg); Acetate synthesis from CO (Geerligs, G. (57) 253)

Soil bacterium
Nitrosospira; Ultrastructure; Crystalline outer membrane protein (Martikainen, P.J. (59) 313)

Soil microbial biomass
Japanese red pine forest; Forest fires; Chloroform fumigation-incubation method (Tateishi, T. (62) 163)

Soils, alder and ash
Rate of denitrification; Acetylene blockage technique; N_2O production; Field method (Struwe, S. (62) 71)

Southern hybridization
Clonal hypothesis; Lipopolysaccharide O-antigen; Serotype (Beger, D.W. (57) 317)

Spatial–temporal mechanisms
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Specific activity
Phosphatidylinositol-specific phospholipase C; Purification; PI-glycan hydrolysis; Catalytic properties (Volwerk, J.J. (61) 237)

Specificity
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Methanogenic bacteria; Alcohol dehydrogenase; Secondary alcohols; Substrates; $NADPH/H^+$; F_{420}; Cyclopentanol; Growth (Bleicher, K. (59) 307)

Spectroradiometry
Microscale distribution; Phototrophic bacteria; Pigment; Transmissometry; Fluorescence, in situ; High-performance liquid chromatography (Steenbergen, C.L.M. (62) 209)

Spheroplast production and regeneration
Spirulina platensis; Cyanobacteria (Lanfaloni, L. (59) 141)

Spirochaetes
Borrelia burgdorferi; Flagellin; Western blotting; Two-dimensional electrophoresis; N-terminal amino acid analysis; Serodiagnosis; Phylogeny (Gaßmann, G.S. (60) 101)

Spirulina platensis
Cyanobacteria; Spheroplast production and regeneration (Lanfaloni, L. (59) 141)

Spontaneous abortion
Virus; High antibody level (Irvine, L.M. (64) 23)

Spontaneous deletion
Corynebacterium diphtheria; Macrolide-lincosamide-streptogramin B resistance; Erythromycin resistance; Methylase gene; *R*-plasmid (Serwold-Davis, T.M. (56) 7)

Spore
Bacillus; Glutaraldehyde (Dancer, B.N. (57) 345)

Bacterial spores; Heat resistance; Water content; *Bacillus sphaericus* (Beaman, T.C. (58) 1)

Clostridium bifermentans; Sporulation; Amino acid sequence (Cabrera-Martinez, R.M. (61) 139)

Sporulation
Clostridium perfringens; Enterotoxin; Macromolecular synthesis (Dillon, M.E. (59) 221)

Clostridium bifermentans; Spores; Amino acid sequence (Cabrera-Martinez, R.M. (61) 139)

Spreading growth
Serratia marcescens; Exolipid; Fractal (Matsuyama, T. (61) 243)

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Protease; Adhesin (Lamont, R.J. (58) 101)

Stability
Bordetella pertussis; Filamentous haemagglutinin; Methyl-β-cyclodextrin (Gorringe, A.R. (55) 315)

Bacillus sp.; Membrane potential; Transmembrane pH gradient (Koyama, N. (61) 7)

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Staphylococcus aureus
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Penicillin-binding protein; β-Lactam antibiotic; Cell wall; Growth (Beise, F. (55) 195)

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Extracellular protein; Gene expression (Coleman, G. (61) 247)

Endo-β-*N*-acetylglucosaminidase; Purification; Dye-ligand affinity chromatography (Sugai, M. (61) 267)

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***Staphylococcus aureus* (MRSA)**
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Staphylococcus epidermidis
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Staphylococcus epidermis
Fosfomycin; Plasmid; Antibiotic resistance (Etienne, J. (61) 133)

Staphylococcus gallinarum
Lantibiotic; Gallidermin; Epidermin; Nucleotide sequence; Post translational modification (Schnell, N. (58) 263)

***Staphylococcus* spp.**
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Starvation
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Steroid hormones
Transcription factors; Regulation (Bernard, H.-U. (64) 201)

Steroid-transforming enzyme
Monoclonal antibodies; *Streptomyces hydrogenans* (Kempf, B. (56) 237)

Strains
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***Streptococcus cremoris* W56**
Streptococcus lactis; Restriction and modification; Phage restriction (Josephsen, J. (59) 161)

Streptococcus group A
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Streptococcus intermedius
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Streptococcus lactis
Restriction and modification; Phage restriction; *Streptococcus cremoris* W56 (Josephsen, J. (59) 161)

Streptococcus mutans
Cell wall protein; Salivary component; Affinity chromatography (Ackermans, F. (55) 279)

Mixed culture; Coexistence; *Actinomyces viscosus*; Oxygen consumption; Mathematical model (Van der Hoeven, H.S. (62) 275)

Streptococcus pyogenes
Transformation; Electroporation; Plasmid (Suvorov, A. (56) 95)

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Streptomyces
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Streptogramins; Ribosomes; Antibiotics; Inactivating enzymes; Vernamycins (Fierro, J.F. (58) 243)

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Streptomyces antibioticus
Phage adsorption; Adsorption; Endodeoxyribonuclease (De los Reyes-Gavilán, C.G. (56) 301)

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Streptomyces aureofaciens
8-Hydroxy-5-deazaflavin; Coenzyme F_{420}; Fragment F_0; Tetracyclines; *Streptomyces rimosus* (Novotná, J. (59) 241)

Streptomyces cattleya
DNA repair mutants; Genetic instability; Mitomycin C (Hromic, A. (57) 139)

Streptomyces clavuligerus
Phosphate regulation; Cephalosporin biosynthesis (Jhang, J. (57) 145)

Streptomyces hydrogenans
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Streptomyces lividans
IPNS gene; *Escherichia coli*; *Cephalosporium acremonium*; Expression; Promoter (Patiño, C. (58) 139)

ppGpp; Thiopeptin; pIJ702 (Ochi, K. (61) 219)

***Streptomyces* plasmid**
Essential region of replicon; Vector construction (Petříček, M. (61) 109)

Streptomyces rimosus
8-Hydroxy-5-deazaflavin; Coenzyme F_{420}; Fragment F_0; Tetracyclines; *Streptomyces aureofaciens* (Novotná, J. (59) 241)

Streptomycetes
Membrane filter; Grow-through mechanism; Morphological alteration; Peptidoglycan synthesis (Wolf, H. (57) 259)

Stress protein
Candida albicans (Matthews, R. (60) 25)

Strict aerobic growth
DNA gyrase; Anaerobiosis; Gene fusion; Nalidixic acid resistance; *gyrA* (Yamamoto, N. (56) 209)

Stringent control
Salt stress; Heat shock proteins (Hecker, M. (58) 125)

Structure determination
Lipopolysaccharide core; Methylation analysis; ^{1}H-NMR; (*Citrobacter freundii*) (Romanowska, E. (58) 107)

Styrene degradation
Pseudomonas fluorescens; Degradative plasmids (Ruzzi, M. (59) 337)

Substrates
Methanogenic bacteria; Alcohol dehydrogenase; Secondary alcohols; Specificity; NADPH/H$^+$; F_{420}; Cyclopentanol; Growth (Bleicher, K. (59) 307)

Succinate
Ethanol; Anaerobic; Acetate; Lactate (Clark, D.P. (63) 223)

Sucrose metabolism
Oral streptococci; Fructan (Aduse-Opoku, J. (59) 279)

Sugar metabolism
Polyglucose utilization; Amino acid fermentation; *Fusobacterium nucleatum* (Robrish, S.A. (55) 29)

Sugar *O*-methyl ether
Lipid A; Lipopolysaccharide; Outer membrane; Prochlorophyta; *Prochlorothrix hollandica* (Jürgens, U.J. (59) 119)

Sugar phosphorylation
Bacterial sugar transport; Membrane protein structure; Protein domains; Phosphotransfer reactions; Mannitol permease (Jacobson, G.R. (63) 25)

Sugar transport
Serendipity; Sialic acid; Phosphotransferase system; Diauxie (Roseman, S. (63) 3)

Phosphoryl transfer; Epitopes; Two-dimensional NMR; Protein structure; X-ray diffraction (Waygood, E.B. (63) 43)

Protein phosphorylation; HPr(Ser) kinase/HPr(Ser-P) phosphatase; Phosphotransferase system (Reizer, J. (63) 149)

Gram-positive bacteria (Fouet, A. (63) 175)

Sulfate
Methane; Salinity; Methanogenic substrate; Methane oxidation; Microbial mats (Giani, D. (62) 143)

Sulfate-reducing bacteria
Tetrazolium salts; Starvation; Electron transport system activity; *Desulfovibrio desulfuricans*; *Desulfotomaculum orientis* (Fukui, M. (62) 13)

Sulfolobus acidocaldarius
Heat shock response; *Thiobacillus ferrooxidans*; Thermotolerance; Protein synthesis; Ethanol (Jerez, C.A. (56) 289)

Sulfur starvation
CO_2 limitation; Nitrite excretion; *Synechococcus* (*Anacystis*) (Krämer, E. (59) 191)

Sulphate-reducing bacteria
Acetate turnover (Gibson, G.R. (62) 303)

Sulphur reduction
Thiobacillus ferrooxidans; Red selenium (Bacon, M. (58) 189)

Superoxide
Endotoxin; Inositol phosphates; Phagocyte (Qu, J. (64) 279)

Superoxide dismutase
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29-kDa Surface-associated adhesive molecule
Entamoeba histolytica; Monoclonal antibody; Trophozoites (Vinayak, V.K. (64) 169)

Surface free energy
Staphylococcus epidermidis; Adherence; Biomaterials (Ferreirós, C.M. (60) 89)

Surface LTA
Oral streptococci; ELISA (Hogg, S.D. (58) 239)

Surface properties
Staphylococcus aureus; Iron; Antigens; Phagocytosis; Chemiluminescence (Domingue, P.A.G. (59) 265)

Surface protein
Enterococcus faecalis; Antigen; Growth conditions; Biofilm (Lambert, P.A. (64) 51)

Symbiosis
Rhizobium spp.; Carbon metabolism; Catabolite repression; Dicarboxylic acids; Glutamate; cAMP (O'Gara, F. (63) 93)

Symbiotic plasmid
Rhizobium leguminosarum; Bacterium; Bacteroid (Vierny, C. (60) 15)

Synechococcus
Glutamate synthase; Cyanobacteria; Heterologous hybridization (Lightfoot, D.A. (57) 129)

***Synechococcus* (*Anacystis*)**
Sulfur starvation; CO_2 limitation; Nitrite excretion (Krämer, E. (59) 191)

***Synechococcus* PCC 7942**
Carbon dioxide fixation; *Thiobacillus versutus*; Ribulose bisphosphate carboxylase; CO_2-concentrating mechanisms (Karagouni, A.D. (58) 179)

Synthesis
Alcaligenes eutrophus; Poly-3-hydrobutate; Polyhydroxyalkanoate (Haywood, G.W. (57) 1)

Synthetic peptide
Amino acid sequence; *Escherichia coli*; Heat-stable enterotoxin; Monoclonal antibody (Svennerholm, A.-M. (55) 23)

Syntrophic associations
H_2 partial pressure; Gibbs free energy; Interspecies formate transfer (Conrad, R. (62) 21)

Syntrophic coculture
Hydrogen partial pressure; Proton reduction; Methanogenesis; Thermodynamics (Seitz, H.-J. (55, 119)

Syringaresinol
Lignin metabolism; Acetal linkage; Intermonomer linkage; Wood-rot fungi (*Coriolus versicolor*) (Katayama, Y. (58) 247)

Tannins
Cellulose decomposition; Fungal community; Litter (Savoie, J.-M. (62) 307)

Tap water
Disinfection; UV-irradiation; Chlorine; Bacteriophages; Sewage; *Bacteroides fragilis* (Tartera, C. (56) 313)

Taxonomy
DNA-DNA hybridization; *Lactobacillus malefermentans*; *Lactobacillus parabuchneri* (Farrow, J.A.E. (55) 163)

Nocardioides fastidiosa sp. nov.; Coryneforms; Molecular systematics (Collins, M.D. (57) 289)

TCA cycle
Regulation; PHB; Fermentation (McDermott, T.R. (63) 327)

T cell subsets
Giardia lamblia; Mice; IgA; IgM; IgG; Immune effector response; Gut (Khanna, R. (64) 137)

TEM
β-lactamase; Ceftazidime; Resistance (Payne, D.J. (59) 97)

Temperature adaptation
Cell ultrastructure; Photosystem stoichiometry (Miller, M. (57) 39)

4-Amino-L-arabinose; Homeoviscous adaptation; Lipid A; *Yersinia enterocolitica*; *Salmonella minnesota*; *Proteus mirabilis*; *Chromobacterium violaceum* (Bhagya Lakshmi, S.K. (60) 317)

Temperature stress
Desiccation; Dehydration; Freezing (Van Laere, A. (63) 201)

Tetracyclines
8-Hydroxy-5-deazaflavin; Coenzyme F_{420}; Fragment F_0; *Streptomyces aureofaciens*; *Streptomyces rimosus* (Novotná, J. (59) 241)

Propionibacteriaceae; Extracellular proteins (Chopra, I. (60) 21)

Tetrahydromethanopterin-b
Methanogenesis from methanol; Formaldehyde oxidation; *Methanosarcina barkeri*; Methanofuran-b (Mahlmann, A. (61) 115)

Tetrazolium salts
Sulfate-reducing bacteria; Starvation; Electron transport system activity; *Desulfovibrio desulfuricans*; *Desulfotomaculum orientis* (Fukui, M. (62) 13)

Tetrodotoxin
Clostridium perfringens epsilon toxin; Isolated rat ileum; Contraction (Sakurai, J. (58) 269)

Thermoacidophiles
Archaebacterium; Reverse gyrase; Topoisomerase; DNA gyrase (Collin, R.G. (55) 235)

Thermodynamics
Hydrogen partial pressure; Proton reduction; Methanogenesis; Syntrophic coculture (Seitz, H.-J. (55) 119)

Thermophile
Anaerobe; Carbohydrate utilisation (Patel, B.K.C. (56) 285)

Bacillus acidocaldarius; Ecology (Hudson, J.A. (60) 279)

Methanobacterium; Methanogenic bacteria; Mushroom compost (Derikx, P.J.L. (62) 251)

Yeast HSP70 gene; Evolutionary conservation/eubacteria/archaebacteria (Lambert, E. (56) 157)

Thermophilic bacterium
Actinomycete; Plasmid; Compost (Pidcock, K.A. (55) 349)

Protoplast formation; *Clostridium* sp. (Pettinari, M.J. (58) 255)

Thermostable
Clostridium thermosulfurogenes; α-Amylase; Gene cloning (Haeckel, K. (60) 333)

Thermostatic direct hemolysin
Vibrio parahaemolyticus; Mutant (Honda, T. (61) 95)

Thermotoga maritima
Elongation factor Tu; Nucleotide sequence; Phylogeny (Bachleitner, M. (57) 115)

Thermotolerance
Heat shock response; *Sulfolobus acidocaldarius*; *Thiobacillus ferrooxidans*; Protein synthesis; Ethanol (Jerez, C.A. (56) 289)

Thiobacillus; Adenylylsulfate (APS) reductase (Taylor, B.F. (59) 351)

Thiamin-binding protein
pho3 mutant; Acid phosphatase; Thiamin phosphates transport; *Saccharomyces cerevisiae* (Nosaka, K. (60) 55)

Thiamin phosphates transport
pho3 mutant; Acid phosphatase; Thiamin-binding protein; *Saccharomyces cerevisiae* (Nosaka, K. (60) 55)

Thiobacillus
Adenylylsulfate (APS) reductase; Thermotolerance (Taylor, B.F. (59) 351)

Thiobacillus ferrooxidans
Heat shock response; *Sulfolobus acidocaldarius*; Thermotolerance; Protein synthesis; Ethanol (Jerez, C.A. (56) 289)

Sulphur reduction; Red selenium (Bacon, M. (58) 189)

Thiobacillus versutus
Linear plasmid; Plasmid pTAV2 (Włodarczyk, M. (55) 125)

Carbon dioxide fixation; *Synechococcus* PCC 7942; Ribulose bisphosphate carboxylase; CO_2-concentrating mechanisms (Karagouni, A.D. (58) 179)

Aspartate-semialdehyde dehydrogenase gene cloning (Jagusztyn-Krynicka, E.K. (59) 21)

Thiocapsa
Chromatium; *Rhodobacter*; *Thiocystis*; Inclusions; Light intensity; Growth medium (Gaju, N. (62) 295)

Thiocapsa roseopersicina
Purple beaches; Purple sulfur bacteria; Profiles of oxygen and inorganic sulfur compounds (Van Gemerden, H. (62) 87)

Thiocystis
Chromatium; *Rhodobacter*; *Thiocapsa*; Inclusions; Light intensity; Growth medium (Gaju, N. (62) 295)

Thiopeptin
Streptomyces lividans; ppGpp; pIJ702 (Ochi, K. (61) 219)

Thioredoxin
Chitin; Mixed cultures; Cross-feeding; Folic acid; Endproduct inhibition (Pel, R. (62) 191)

Anaerobic polymer degradation; Chitin; Redox stimulation (Pel, R. (62) 349)

^{3}H-Thymidine labeling
Nanoflagellates grazing; Bacteriophage-induced mortality (Servais, P. (62) 119)

Thymidine phosphorylase
Uridine phosphorylase; *Lactobacillus casei* (Avraham, Y. (56) 29)

Tobramycin
Pseudomonas aeruginosa; Calcium; Alginate (Hoyle, B.D. (60) 339)

TOL plasmid
Plasmid stability; Effects of potassium and glucose limitation. (Stephens, G.M. (55) 175)

o-Toluate
Pseudomonas sp. strain WR401; Methylsalicylate; *Meta*-pathway; Chlorobenzoate conversion (Engelberts, K. (59) 35)

Toluene dioxygenase
Indigo production; Cloning of toluene oxidation genes (Stephens, G.M. (57) 295)

Topoisomerase
Archaebacterium; Reverse gyrase; Thermoacidophiles; DNA gyrase (Collin, R.G. (55) 235)

Toxin
Vir plasmid; Multinucleation; *Escherichia coli* (Oswald, E. (58) 95)

Bacillus thuringiensis; Delineation; Dual toxicity; Mutant protein; Specificity (Haider, M.Z. (58) 157)

Toxin gene
Electroporation; Genetic expression; Insecticidal activity; Plasmid (Lereclus, D. (60) 211)

Toxins
Clostridium; Plasmid; Transformation; Conjugation; Transposon; Fermentation; Gene cloning; Gene structure; Gene expression (Young, M. (63) 301)

TP181 plasmids
Bharangin; Gossypetin; Curing (Lakshmi, V.V. (57) 275)

Transcriptional control
pts genes; Chromosomal map (De Reuse, H. (63) 61)

Transcriptional fusion
Gene regulation; Promoter test vector; *Escherichia coli*; Bacteriophage Mu; Gene expression (Apfel, C. (55) 65)

Transcriptional regulation
Evolution; Nucleic acid sequences; Membrane targeting; Protein phosphorylation; Bacterial virulence (Saier, Jr., M.H. (63) 183)

Transcription factors
Regulation; Steroid hormones (Bernard, H.-U. (64) 201)

Transcription initiation
Gene regulation; Promoter; Sigma factor; Positive control (Thöny, B. (63) 341)

Transfer of IncP1 plasmids
Desulfovibrio; Mobilisation of IncQ plasmids; IncP1 mediated retrotransfer (hermaphroditism) (Powell, B. (59) 269)

Transformation
Bacillus subtilis; Protoplast; Plasmid (Rubinstein, C.P. (56) 67)

Clostridium acetobutylicum; Cloning vector; Electroporation (Oultram, J.D. (56) 83)

Streptococcus pyogenes; Electroporation; Plasmid (Suvorov, A. (56) 95)

Bordetella; Electroporation; Electric field pulses (Zealey, G. (56) 123)

Clostridium acetobutylicum; Vector (Truffaut, N. (58) 15)

Bacillus thuringiensis; Electroporation (Bone, E.J. (58) 171)

Penicillium chrysogenum; Benomyl (Picknett, T.M. (60) 165)

Bacillus thuringiensis; Electroporation (Mahillon, J. (60) 205)

Metarhizium anisopliae; Entomopathogen; Fungus; Protoplast; Cosmid (Bernier, L. (60) 261)

Bacteroides; Electroporation; Plasmids (Thomson, A.M. (61) 101)

Clostridium; Plasmid; Conjugation; Transposon; Toxins; Fermentation; Gene cloning; Gene structure; Gene expression (Young, M. (63) 301)

Transfusion
Prostaglandin E_2; Macrophage; Immunosuppression (Ross, W.B. (64) 321)

Transmembrane pH gradient
Bacillus sp.; Membrane potential; Stability (Koyama, N. (61) 7)

Transmissometry
Microscale distribution; Phototrophic bacteria; Pigment; Fluorescence, in situ; Spectroradiometry; High-performance liquid chromatography (Steenbergen, C.L.M. (62) 209)

Transport
Phage receptor; Maltoporin; Lipoprotein; Maltodextrins (Saurin, W. (63) 53)

Transposon
Clostridium; Plasmid; Transformation; Conjugation; Toxins; Fermentation; Gene cloning; Gene structure; Gene expression (Young, M. (63) 301)

Transposon mutagenesis
Broad-host-range plasmid; Conjugation; Cosmid mobilization; Rhizosphere; *Pseudomonas fluorescence* (Voisard, C. (55) 9)

Transposon Tn*501*
Escherichia coli; Bifunctional vectors; Conjugal mobilization; *Bacteroides*; Clindamycin resistance; Shuttle plasmid (Pheulpin, P. (55) 15)

Trehalose-6-phosphate synthases
Candida utilis; Protein phosphorylation; Enzyme inactivation (Vicente-Soler, J. (61) 273)

Trehalose phosphorylase
α-Glucose-1-phosphate; *Flammulina velutipes* (Kitamoto, Y. (55) 147)

Treponema hydrosenteriae
Cell envelope; Antigen; Membrane protein (Chatfield, S.N. (55) 303)

Triangular bacterium
Cell plate; Cell division; Halobacterium; Cinematography (Hamamoto, T. (56) 221)

Trichoderma reesei
Endocellulase; Immunomicroscopy; Cell wall; Cellulose (Sprey, B. (55) 283)

Trifolium repens
Methylotrophic bacteria; Leaf heterotroph (Corpe, W.A. (62) 243)

Trimethoprim
Resistance; Faecal bacterium; Gram-negative bacterium (Lamikanra, A. (59) 275)

Tritium uptake
Hydrogen metabolism (Fu, C. (59) 331)

Trophic adaptation
Exoglucanase; Endoglucanase; Domain homology (West, C.A. (59) 167)

Trophozoites
Entamoeba histolytica; Monoclonal antibody; 29-kDa Surface-associated adhesive molecule (Vinayak, V.K. (64) 169)

Trypanosoma cruzi
Glutamate dehydrogenase; NAD; NADP; Purification; Amino acid composition; N-terminal sequence (Cazzulo, J.J. (56) 215)

Aldehyde reductase; Pyruvate decarboxylase (Arauzo, S. (58) 283)

Fatty acid; Lipid; Cell differentiation (Esteves, M.G. (59) 31)

Fructose 2,6-diphosphate; Enzyme inhibition (Cazzulo, J.J. (59) 259)

Trypsin
Virulence; Collagen breakdown; Cytotoxin; Haemin; *Bacteroides gingivalis* (Marsh, P.D. (55) 87)

Ultrastructure; Virulence; *Bacteroides gingivalis* (Marsh, P.D. (59) 181)

***tuf* gene**
Neisseria gonorrhoeae; *Chlamydia trachomatis* (Goldstein, B.P. (60) 305)

Tumor cytotoxicity
Gordona aurantiaca; Mycolic acid; Activated macrophage; Liposome (Furukawa, M. (64) 83)

Tumour-specific immunity
DNA-mediated gene transfer; Major histocompatibility complex (Hui, K.M. (64) 215)

Tunicamycin
Yeast; Cell wall; Secretion; Glycosylation (Sanz, P. (57) 265)

Tween 80
Electroporation; *Brevibacterium lactofermentum* (Haynes, J.A. (61) 329)

Two-dimensional electrophoresis
Borrelia burgdorferi; Flagellin; Western blotting; N-terminal amino acid analysis; *Spirochaetes*; Serodiagnosis; Phylogeny (Gaßmann, G.S. (60) 101)

Two-dimensional gel electrophoresis
Bacillus subtilis; Cell differentiation; Protein phosphorylation (Köhler, E. (57) 87)

Two-dimensional NMR
Phosphoryl transfer; Epitopes; Protein structure; X-ray diffraction; Sugar transport (Waygood, E.B. (63) 43)

Type IV collagen
Streptococcus pyogenes; Glomerulonephritis (Kostrzynska, M. (59) 229)

Tyzzer's organism
Intracellular parasite; Growth kinetics (Kawamura, S. (59) 125)

pUB110
Electro-transformation; Electropermeabilization; *Bacillus subtilis*; pC194; pE194 (Vehmaanperä, J. (61) 165)

U937 cells
Legionella pneumophila; Conjugal DNA transfer; Counterselectable plasmids; Allelic exchange (Cianciotto, N.P. (56) 203)

Ultrastructure
Trypsin; Virulence; *Bacteroides gingivalis* (Marsh, P.D. (59) 181)

Soil bacterium; *Nitrosospira*; Crystalline outer membrane protein (Martikainen, P.J. (59) 313)

Autolysis; Cell wall surface; Plasma membrane; *Saccharomyces cerevisiae* (Takeo, K. (61) 297)

Uptake
Cyanobacterium; Heavy metal; Copper; Immobilization (Singh, S.P. (60) 193)

Uranium accumulation
Phosphatase overproduction; *Citrobacter* isolation (Macaskie, L.E. (55) 157)

Ureaplasma urealyticum
Urease; Monoclonal antibody (Saada, A.-B. (55) 187)

Urease
Ureaplasma urealyticum; Monoclonal antibody (Saada, A.-B. (55) 187)

pH profile; *Campylobacter pylori*; Gastric campylobacter-like organism (Taylor, M.B. (55) 259)

Urea uptake; *Bacillus megaterium* (Jahns, T. (57) 13)

Cyanobacteria; *Anabaena doliolum*; Purification; Properties (Rai, A.K. (61) 319)

Urea-uptake
Anabaena doliolum; Cyanobacterium; Regulation (Singh, S. (56) 281)

Urease; *Bacillus megaterium* (Jahns, T. (57) 13)

Anabaena doliolum; Cyanobacterium; Regulation (Singh, S. (61) 199)

Uridine phosphorylase
Thymidine phosphorylase; *Lactobacillus casei* (Avraham, Y. (56) 29)

UV-irradiation
Disinfection; Chlorine; Bacteriophages; Tap water; Sewage; *Bacteroides fragilis* (Tartera, C. (56) 313)

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